

By ELIZABETH B. BRYANT

CONTENTS

	PAGE
Introduction	255
Previous Investigations	255
Table of species by families	257
Systematic List	259
Sub-order Mygalomorphae	259
Family Dipluridae	260
Sub-family Macrothelinae	260
Ischnothele	260
Family Barychelidae	260
Sub-family Leptopelmatinae	260
Stothis	260
Family Theraphosidae	261
Sub-family Grammostolinae	261
Eurypelma	261
Sphaerobothria	261
Sub-family Theraphosinae	262
Phormictopus	262
Sub-order Arachnomorphae	263
Family Filistatidae	263
Filistata	263
Filistatoides	263
Family Dysderidae	264
Ariadna	264
Family Oonopidae	264
Sub-family Oonopinae	264
Oonopinus	264
Heteroonops	265
Oonopoides	265
Sub-family Gamasomorphinae	266
Ischnothyreus	266
Opopaea	267
Triaeris	268
Sub-family Tetrablemminae	269
Tetrablemma	269
Family Caponiidae	271
Nops	271
Caponina	272

¹ Published with the aid of a special gift from Mr. George R. Agassiz.

	PAGE
Family Oecobiidae	273
Oecobius	273
Family Agelenidae	273
Chorizomma	273
Family Hersiliidae	274
Tama	274
Family Palpimanidae	275
Otiothops	275
Family Pisauridae	276
Pelopatis	276
Thaumasia	277
Family Lycosidae	278
Sub-family Lycosinae	278
Lycosa	278
Arctosa	283
Sub-family Pardosinae	284
Pardosa	284
Family Oxyopidae	286
Oxyopeidon	286
Oxyopes	286
Peucetia	287
Family Sicariidae	287
Sub-family Loxoscelinae	287
Loxosceles	287
Sub-family Scytodinae	287
Scytodes	287
Family Pholcidae	289
Sub-family Pholcinae	289
Artema	289
Modisimus	289
Physocylus	293
Smeringopus	294
Systemita	294
Sub-family Leptopholcinae	296
Micromerys	296
Sub-family Ninetidinae	297
Ninetella	297
Family Dictynidae	298
Dictyna	298
Scotolathys	300
Family Theridiidae	301
Sub-family Pholcommatinae	301
Paidisca	301
Ulesanis	302

	PAGE
Sub-family Asageninae	302
Asagena	302
Coleosoma	303
Lithyphantes	304
Sub-family Latrodectinae	304
Dipoea	304
Latrodectus	305
Sub-family Argyrorodinae	306
Conopistha	306
Rhomphaea	308
Spintharus	309
Sub-family Theridiinae	310
Achaea	310
Anelosimus	311
Chrysso	311
Episus	313
Meotipa	314
Stemmops	316
Theridion	317
Theridula	320
Sub-family Nesticinae	320
Nesticus	320
Family Linyphiidae	323
Sub-family Linyphiinae	323
Linyphiella	323
Sub-family Lophocareninae	323
Ceraticelus	323
Sub-family Gonatiinae	325
Walckenaera	325
Sub-family Erigoninae	325
Ceratinopsis	325
Erigone	326
Grammonota	326
Family Uloboridae	327
Sub-family Uloborinae	327
Uloborus	327
Miagrammops	329
Family Deinopidae	331
Deinopis	331
Family Argiopidae	333
Sub-family Argiopinae	333
Argiope	333
Gea	334
Sub-family Araneinae	334

	PAGE
Aranea	334
Cyclosa	335
Drexelia	337
Edricus	337
Eriophora	338
Eustala	338
Marxia	339
Metazygia	339
Metepeira	341
Neoscona	341
Parawixia	342
Scoloderus	344
Singa	344
Verrucosa	345
Wagneriana	346
Wixia	346
Sub-family Metinae	348
Azilia	348
Lucarachne	349
Pseudometa	352
Sub-family Nephilinae	354
Nephila	354
Sub-family Tetragnathinae	355
Agriognatha	355
Alcimosphenus	357
Allepeira	358
Glenognatha	358
Leucauge	359
Mimognatha	362
Pachygnatha	363
Tetragnatha	363
Sub-family Theridiosomatinae	367
Theridiosoma	367
Wendilgarda	369
Sub-family Gasteracanthinae	369
Gasteracantha	369
Micrathena	369
Family Mimetidae	377
Mimetus	377
Family Ctenidae	377
Sub-family Cteninae	377
Celaetycheus	377
Ctenus	379
Cupiennius	384
Family Gnaphosidae	387

	PAGE
Sub-family Anagraphidinae	387
Paratheuma	387
Sub-family Gnaphosinae	389
Gnaphosa	389
Sub-family Drassodinae	390
Eilicina	390
Caridrassus	392
Litopyllus	393
Paramyrmecion	394
Pocilochroa	396
Teminius	397
Family Sparassidae	398
Sub-family Sparianthidinae	398
Pseudosparianthis	398
Stasina	400
Sub-family Heteropodinae	403
Heteropoda	403
Family Selenopidae	404
Sub-family Selenopinae	404
Selenops	404
Family Thomisidae	408
Sub-family Stephanopsinae	408
Isaloides	408
Onocolus	409
Parastephanops	412
Sub-family Misumeninae	413
Misumenops	413
Xysticus	415
Family Aphantochilidae	417
Majellula	417
Family Clubionidae	418
Sub-family Clubioninae	418
Cheiracanthium	418
Clubiona	420
Sub-family Anyphaeninae	427
Anyphaena	427
Anyphaenella	432
Aysha	433
Oxysoma	435
Temnida	436
Wulfila	437
Sub-family Liocraninae	439
Liocranum	439
Phrurolithus	440
Sub-family Corinninae	441

	PAGE
Corinna	441
Trachelas	443
Sub-family Micariinae	445
Chemmis	445
Myrmecotypus	445
Castianeira	446
Family Salticidae	448
Sub-family Lyssomaninae	448
Lyssomanes	448
Sub-family Myrmarachninae	450
Synemosyna	450
Sub-family Thiodininae	451
Thiodina	451
Nilakantha	454
Sub-family Peckhamiinae	456
Peckhamia	456
Sub-family Hasariinae	456
Siloca	456
Sidusa	460
Sub-family Maeviinae	463
Metacyrba	463
Balmaceda	464
Sub-family Zygoballinae	465
Agobardus	465
Zygoballus	480
Sub-family Plexippinae	482
Corythalia	482
Pardessus	490
Plexippus	491
Sub-family Pelleninae	491
Pellenes	491
Sub-family Dendryphantinae	493
Hentzia	493
Icius	500
Metaphidippus	501
Paraphidippus	502
Phidippus	502
Sub-family Sitticinae	504
Neon	504
Sub-family Marpissinae	505
Hycia	505
Marpissa	505
Appendix	507
Bibliography	516
Index	523
Explanations of Plates	533

INTRODUCTION

Previous Investigations

Until recent years the spider fauna of the West Indies has received little attention. Some collections from St. Vincent, Dominica, Jamaica, Haiti and the Barbadoes have been made and the new species described by various workers. In 1925 Dr. Petrunkevitch spent five months on Puerto Rico, and the results of his collecting was published in the *Trans. Conn. Acad.* in 1929-1931. This was the first extensive collection from any of the islands. Cuba has received but scant attention. Probably the first naturalist to collect there was W. S. MacLeay, an Englishman, who spent several years at Guanabacoa. He figured and described in 1839 a few species he collected there. Later, several European arachnologists from time to time included in their writings descriptions of Cuban species. Baron de Walckenaer in his *Histoire Naturelle des Insectes*, 1837, described several that were in the Paris Museum. In 1857, Lucas wrote "Arachnides", in Ramon de Sagra, "*Histoire physique, politique et naturelle de l'île de Cuba*;" this is little more than a list of twelve species, although six were described and figured as new. Nearly thirty years later, the Peckhams began publishing their numerous papers on Attidae, through which are scattered descriptions of a few Cuban species. In 1909, Mr. N. Banks published a short paper on the "Arachnida of Cuba" in the Second Report of the Central Experimental Station of Cuba. This contains descriptions of eleven new species, as well as a list of a hundred that were recorded for the first time. It is based on material in the National Museum collected by Palmer and Riley in 1900 and by Schwarz in 1902 and on material sent him by C. F. Baker from Santiago de las Vegas. This paper has often been overlooked, as the publication had a limited circulation. In 1911, M. Sanchez Roig began the publication of "*Los Aracnidos de la Isla de Cuba*" in the *Revista de la Facultad de Letras y Ciencias*, Universidad de Habana. This was based on Banks' paper but unfortunately was never completed. The unpublished part of the manuscript remains in the custody of the University and may be consulted in its library.

During a trip to Cuba in 1913, Leng and Lutz made a small collection of spiders for the American Museum of Natural History, and the new species were described by Banks the following year. A year later, Lutz published a "List of Greater Antillean Spiders", in which Cuba is credited with some eighty-odd genera.

In 1926, Father Pelegrin Franganillo Balboa, S. J. published the first of a series of papers based on his studies. The final results appeared in 1936 under the title of "Los Aracnidos de Cuba hasta 1936", (Havana 1936). It is to be regretted that this much needed and most useful pioneer work should have its value impaired by the omission, through some oversight, of the dates when the various species were first described. The fact that species denoted as "spec. nov." in this paper were actually described by Father Franganillo as early as 1926, cannot fail to lead to confusion and controversy, unless the greatest caution is observed; this situation is doubly serious since, as the author has himself pointed out, the earlier descriptions appeared in journals of very restricted circulation. But that fact cannot justify the republication of these species as "spec. nov." at this later date.

The Museum of Comparative Zoology's collection is very rich in Cuban material. Among its earliest accessions are a few from Professor Poey, a famous collector of insects in the middle of the nineteenth century. In 1908, the Peckham Collection of Attidae was added to the Museum. Besides the identified material used in their papers, this contained a small collection from H. S. Parish made near Holguín, Oriente. Some had been sorted into genera by the Peckhams, and a few of the more common species determined. The Banks Collection was received in 1916. This contained most of the material used by Mr. Banks in the preparation of his paper on the "Arachnida of Cuba" (1909), as well as specimens received later from C. F. Baker, collected in the region about Santiago de las Vegas, Havana. The greater part of the Attidae in the Banks Collection had been identified by the Peckhams.

In recent years much material has been added, mainly as the result of Dr. Barbour's activities. He not only collected a great deal during his many trips to the island, but also has been instrumental in interesting others in the spider fauna. He employed Señor F. Cervera to collect material from the vicinity of Havana, Mr. C. T. Ramsden has given him a small but most interesting collection from the country about Guantánamo, Oriente, and to Professor Victor Rodriguez Ferrer we are indebted for several small species from Siboney.

Thanks to the energy and interest of students and others who have visited the Harvard Station at Soledad, many spiders naturally found their way to the Museum. Not only do these collections cover a wide and diversified area, but more important, perhaps, is the fact that practically every month of the year is represented. During the late winter and spring of 1925, Drs. George Salt and J. G. Myers made

collections at Soledad and in the Trinidad Mountains. Mr. Banks and Dr. L. G. Worley spent the month of August, 1931 there and returned with much material, including many small species usually overlooked. During July, 1932, Dr. O. Marston Bates and A. G. B. Fairchild added some very remarkable material from the vicinity of Soledad, using the Berlese funnel. But in point of numbers and importance, the collections made by Dr. P. J. Darlington, Jr. have added more than any other. The first collections were made about Soledad and the surrounding territory in 1926, but many more specimens and also species came in 1936, when Dr. Darlington worked at many localities in Oriente. This area was previously unrepresented in the collection except for a small collection sent in 1935 by Dr. S. C. Bruner from the Sierra de Cobre, a locality from which Father Franganillo had received much of his material.

As to the origin of the spider fauna of Cuba, nothing very definite can be postulated from present knowledge. Too little is known of the coastal area from Florida through Central America and as Mr. Banks pointed out in 1909, Yucatan is as near Cuba as is Florida, so it may well be that some species now known from Cuba may also occur in that little explored region.

That each island has an indigenous fauna is seen by comparing the species of Cuba and Puerto Rico, the only other island of the West Indies that has been carefully studied. In 1929-1931, Dr. Petrunkevitch published his admirable work on that island, based on collections made during a five months visit, with added material from the American Museum and the National Museum. 174 species and subspecies were fully described, of which 72 were new. In view of the fact that Cuba is several times larger and has much more varied country, undoubtedly it will have more than double the number of species reported here, when collections from other localities have been examined.

The following list tabulates the number of species by families reported from the two islands.

	<i>Cuba</i>	<i>Puerto Rico</i>	<i>Common to Both</i>
Dipluridae	1	2	0
Barychelidae	1	0	0
Theraphosidae	4	6	0
Filistatidae	2	1	1
Dysderidae	1	1	0
Oonopidae	8	5	4
Caponiidae	2	0	0

	<i>Cuba</i>	<i>Puerto Rico</i>	<i>Common to Both</i>
Oecobiidae	1	1	1
Agelenidae	1	1	0
Hersiliidae	1	0	0
Palpimanidae	1	1	0
Pisauridae	3	2	1
Lycosidae	8	4	2
Oxyopidae	4	3	3
Leptonetidae	0	1	0
Sicariidae	5	4	3
Pholcidae	12	11	4
Dictynidae	3	1	0
Theridiidae	31	23	13
Linyphiidae	7	4	0
Uloboridae	5	3	2
Deinopidae	1	1	1
Argiopidae	64	48	25
Mimetidae	2	2	1
Ctenidae	7	2	0
Gnaphosidae	10	1	0
Sparassidae	4	5	1
Selenopidae	5	3	1
Thomisidae	8	4	1
Aphantochilidae	1	0	0
Clubionidae	35	19	6
Salticidae	42	15	3
	280	173	73

That there are remnants of a very ancient fauna in Cuba is indicated by the presence of *Tetrablemma cambridgei* Bryant, a very primitive four-eyed species of less than a millimeter in length. The genus is known from three species, the genotype being from Ceylon and the second species from Australia. Also three genera known only from Venezuela have been found in the Oriente, e.g. *Triacris*, (Oonopidae), *Temnida*, (Clubionidae) and the new genus *Lucarachna*, (Argiopidae). Recently Dr. Darlington has shown, (Quart. Rev. Biology, 13, 1938, pp. 274-300), that it is not improbable that in an earlier geological age, the water area between Cuba and the mainland was much narrower, and it is possible that small forms were carried across by hurricanes to

the Greater Antilles from the mainland. That small spiders are found in the air at great elevations in calm weather and may be carried a great distance, are well recognized facts. In 1928, Dr. Petrunkevitch published a brief note, (*Science*, vol. 68, p. 65), on the Antillean spider fauna, stating "the fauna of the Lesser Antilles has South America and particularly Venezuela for its origin, and developed along the paths of air currents, especially of hurricanes. In Puerto Rico we find the last traces of this fauna, admixed to the fauna which came from the west." This view may well be modified, when the fauna of the separate islands is better known.

In the preparation of this paper, 280 species have been seen of which 92 are new. All the material used in this study is in the collection of the Museum of Comparative Zoology, with the exception of one species which was kindly loaned by the late Dr. C. S. Crosby, for whose help and advice I feel the greatest gratitude. Sincere thanks are due to Dr. Petrunkevitch for the gift of several species that are common to Puerto Rico and Cuba and to Dr. Louis Fage of the Paris Museum for the loan of *Cyclosa oculata* from the Simon Collection. I also wish to express my sincerest appreciation to Mr. Banks for his unfailing interest and assistance, without which the work of completing this paper would have been much more arduous.

In arrangement of families, the classification of Petrunkevitch's "Systema Aranearum" (1928) has been followed, since it includes all spider genera known up to that time and is the one at present used in the Zoological Record.

SYSTEMATIC LIST

Sub-order MYGALOMORPHAE

Only three of the eight families belonging to this sub-order are as yet reported from Cuba. Many species have been described from the island and many more have been recorded but only six species have been seen by me.

Family DIPLURIDAE

Sub-family MACROTHELINAE

Genus ISCHNOTHELE Ausserer 1875

ISCHNOTHELE LONGICAUDA Franganillo

Ischnothele longicauda Franganillo, 1936, p. 17, figs. 2, 3. (♀, Cuba, Loma del Gato, etc., Franganillo Coll.)

Ischnothele macrura Banks, nec C.Koch, 1909, p. 155.

This species is reported by Franganillo from several localities. In the few specimens seen, the eyes of the anterior row are almost equidistant and are separated by less than a diameter of a.m.e. The a.m.e. are slightly smaller than a.l.e. but there is not the difference in size as figured by Franganillo.

Three other species in three other genera belonging to this subfamily, have been reported from Cuba. All three are described with the superior spinnerets very long and the inferior pair separated by at least four diameters. *Diplura macrura* (C. Koch) was described from a male from "St. Juan," one of the Virgin Islands. *Thalerothele striatipes* Simon (Hist Nat. Aran., 1, 1892, p. 187), reported by Franganillo, has been synonymized with *Thelechoris rutenbergi* Karsch of Madagascar (cf Simon, *ibid.*, 2, appendix, p. 968), where both genera are treated as synonyms of *Ischnothele*. However, it is scarcely probable that a spider from Madagascar would be found in Cuba. The specimen of *Ischnocolus hirsutus* (Ausserer), noted by Banks, is either a very young *Eurypelma* or a *Lasiadora*, according to Petrunkevitch. It is possible that all three reported species belong here.

Family BARYCHELIDAE

Sub-family LEPTOPELMATINAE

Genus STOTHIS Simon 1889

STOTHIS CUBANA Banks

Stothis cubana Banks, 1909, p. 155.

The type of this species is a female from Santiago de las Vegas and is in the Collection of the Museum of Comparative Zoology. Probably it has been dried, as it is too brittle to be handled and nothing more can be added to the description already given. Franganillo has found it in the Sierra Maestra.

Holotype ♀ Cuba; Santiago de las Vegas, (Baker), Banks Coll.

Family THERAPHOSIDAE

Sub-family GRAMMOSTOLINAE

Genus EURYPELMA C. Koch 1850

EURYPELMA SPINICRUS (Latreille)

Mygale spinicrus Latreille, Dict. d'Hist. Nat., 2 ed., 1828, **22**, p. 118. (Cuba).

Mygale cubana Walckenaer, 1837, p. 213.

Xenestis (sic) *cubana* Franganillo, 1930, p. 8 of reprint (intended as a new species.)

Demotarbus cubanus Franganillo, 1931, p. 168 (new genus for his species.)

Xenesthis cubana Franganillo, 1936, p. 34 in text.

Xenestis (sic) *cubana* Franganillo, op. cit., footnote on p. 36.

The remarkable nomenclatural shuffles of Franganillo are difficult to follow. His "new species," *cubana*, was proposed, unaware of Walckenaer's earlier name. He considered that his new spider was not Latreille's *spinicrus*, and referred it at first to *Xenestris* Simon, 1891. Later he proposed a new genus *Demotarbus*. In his later publication of 1936, he quite improperly stated that *Eurypelma spinicrus* Latr. was a synonym of *Demotarbus cubanus*, and "should be suppressed," while of the combination *Xenestis cubana*, he wrote "from now on it ceases to exist." The footnote on page 36, however, states that his species *cubana* is a synonym of *spinicrus* (Latr.).

Genus SPHAEROBOTHRIA Karsch 1879

SPHAEROBOTHRIA GIBBOSUS (Franganillo)

Cyrtopholis gibbosus Franganillo, 1935, p. 259, pl. 23, and figs. 1-5.

Female. Length, 30.0 mm., exclusive of mand., ceph. 14.0 mm., 11.5 mm. wide, abd. 16.0 mm.

Cephalothorax chestnut brown, moderately convex, truncate in front, covered with fine yellowish hairs, margins fringed with long hairs, thoracic groove a circular pit very near the posterior margin, completely filled with a cone 4.0 mm. high, with surrounding groove obliterated except on posterior margin; eye tubercle rather low, very near anterior margin, anterior row of eyes straight and eyes equidistant, a.m.e. separated by diameter, a.l.e. slightly larger than a.m.e., posterior row procurved, p.m.e. very small, a.l.e., p.l.e. and p.m.e. form a compact group; mandibles rather long, reddish-brown, thickly covered with fine hairs and long bristles; labium wider than long,

anterior margin covered with spinules; maxillae divergent, with scopula of reddish-yellow hairs on inner margin, apical angle in a conical projection, spinules anterior to the labium; sternum 7.0 mm. long, 6.0 mm. wide, truncate at anterior and posterior margins, IV coxae touching; abdomen shrunken and tip injured, dark brown, covered with long yellow hairs, spinnerets, apparently two pairs, superior pair four jointed; legs, 4-1-2-3, I pair, femur bent and flattened laterally, 10.0 mm. long, patella, 5.5 mm., tibia, 8.0 mm., metatarsus, 5.0 mm., anterior pairs with two narrow stripes of light hairs, separated by a wider dark stripe on patella, tibia and metatarsus, posterior pairs dull brown, covered with long yellowish hairs, anterior tarsi and metatarsi scopulate, posterior tarsi only scopulate, scopula not divided by row of setae, no spines on anterior pairs, unpaired spines beneath tibiae and metatarsi of III and IV; palpi colored like legs.

♀ Cuba; Trinidad Mountains, San Blas, September-December 1931, (G. C. Rowe), no. 10085

The genus *Sphaerobothria* was established for the species *hoffmanni*, tentatively identified by F. O. P. Cambridge from Costa Rica. He stressed the circular thoracic fovea with the conical tubercle. The primary character used by Simon in separating genera in this subfamily is the presence of a median row of setae in the scopula of the IV tarsus and this is supposed to be wanting in the genus *Sphaerobothria*. According to F. O. P. Cambridge, this is of little value, as it is easily overlooked and often does not develop until the last moult. Specimens of *S. hoffmanni* in the Museum of Comparative Zoology Collection show scattered setae throughout the scopula. The thoracic fovea is deep and entirely surrounds the conical tubercle.

The only specimen of *S. gibbosus* seen is a female, probably one moult from maturity, as it is about 5.0 mm. less than the dimensions given by Franganillo, lacks the sigilla on the sternum and has fewer spicules on the maxillae. It is much smaller than *S. hoffmanni*, the cone in the thoracic groove is higher and very near the posterior margin and the groove shows only as a trace on the posterior side.

Sub-family THERAPHOSINAE

Genus PHORMICTOPUS Pocock 1901

PHORMICTOPUS CUBENSIS Chamberlin

Phormictopus cubensis Chamberlin, 1917, p. 59.

This species was described from two females, one probably collected near Havana by Felipe Poey. It may be the female of *P. caudus* (Ausserer), which is known only from the male.

Holotype ♀ Cuba; Havana, (Poey)

Paratype ♀ Cuba.

PHORMICTOPUS NESIOTES Chamberlin

Phormictopus nesiotes Chamberlin, 1917, p. 60, pl. 4, figs. 8, 9.

Described from a male and two females collected in Cuba, 1864.

Sub-Order ARACHNOMORPHAE

Family FILISTATIDAE

Genus FILISTATA Latreille 1810

FILISTATA HIBERNALIS Hentz

Filistata hibernalis Hentz, 1842, p. 227, pl. 8, fig. 6.

Filistata capitata Hentz, *ibid.*, p. 228, pl. 8, fig. 7.

This species is found in the southern part of the United States, Central America and the West Indies. It is common in all collections from Cuba. Petrunkevitch (1929) figures and describes both sexes, p. 56, figs. 36-40.

Genus FILISTATOIDES F.O.P. Cambridge 1899

FILISTATOIDES INSIGNIS (O.P. Cambr.)

Filistata insignis O.P. Cambridge, 1896, p. 211, pl. 26, fig. 12, pl. 28, fig. 8.

Filistatoides insignis, F.O.P. Cambridge, 1899, p. 47, pl. 3, fig. 10.

Female. Length, 4.5 mm., ceph. 2.0 mm., abd. 2.6 mm.

Cephalothorax bright brown, with a narrow marginal dark stripe and a diffuse median stripe from eye group to posterior margin, indented at thoracic groove, thoracic groove deep; eyes as in *Filistata hibernalis*; sternum longer than wide, slightly emarginate; abdomen pale yellow with a wide median stripe which in posterior half is broken by four to six chevrons connected in the center, venter pale; legs long and slender, same color as cephalothorax, with broken dark bands on femora, two on tibiae and metatarsi, no spines on anterior legs, calamistrum on basal half of fourth metatarsus; palpi large and covered with colorless hairs.

Male. Length, 4.0 mm., ceph. 2.0 mm., abd. 2.5 mm.

Coloring and markings same as on female but the bands on the legs less distinct; palpus very long and slender.

♂ ♀ Cuba; Santiago de las Vegas, 23 June, Banks Coll.

The species is based on a male and female from Guatemala. F.O.P. Cambridge described the genus *Filistatoides*, with this species as the type, because the sternum is longer than wide, the anterior legs are spineless and the anterior median eyes are equal to the posterior median eyes. It is smaller than *Filistata hibernalis*. Immature specimens were found at Soledad. Petrunkevitch did not find it in Puerto Rico.

Family DYSDERIDAE

Genus ARIADNA Audouin 1825

Only two specimens of this genus have been seen. Franganillo reports *Ariadna bicolor* Hentz from Cuba but gives no definite locality. This species is found in the eastern part of the United States and has four pairs of long spines beneath the first tibia. Our immature specimens are from Soledad and Buenos Aires, 2,500–3,500 feet elevation, in the Trinidad Mountains. The first tibia has seven pairs of spines, overlapping and of equal length and seven pairs on the first metatarsus. Petrunkevitch reports *Ariadna arthuri* from Saint Thomas, Virgin Islands, also known only from an immature female. This species has seven pairs of spines on the first tibia that are alternately long and short. From St. Vincent, Simon reports *Ariadna solitaria*, with four pairs of spines beneath the first tibia as in *A. bicolor*.

Family OONOPIDAE

Sub-family OONOPINAE

Genus OONOPINUS Simon 1892

OONOPINUS MINUTISSIMUS Petrunkevitch

Figure 1

Oonopinus minutissimus Petrunkevitch, 1929, p. 70, figs. 58–60.

Male. Length, 0.9 mm.

The male is marked the same as the female, possibly the pigmentation is not quite as deep. The palpus is remarkable; the femur is half as long as the cephalothorax, patella is almost round, tibia is greatly

enlarged, rounded on the exterior side and on the ventral extended in a large spur which is prolonged as a long stiff bristle; the tarsus is rather small with several long stiff hairs at the tip, the palpal organ is globose, scarcely covered by the cymbium, semi-transparent with a dark loop in the center. It is impossible to see any further structure.

Allotype ♂ Cuba; Soledad, Vilches Cave, 3 July 1931, (Bates and Fairchild)

Several males and females were collected by a Berlese trap from rubbish in Vilches Cave, near Soledad. Probably the amount of pigmentation varies, as the type collected from sifting dry leaves at Toa Alta, near San Juan, Puerto Rico has more color, but structurally the Cuban specimens agree with the type.

Genus *Heteroonops* Dalmas 1916

Heteroonops spinimanus (Simon)

Oonops spinimanus Simon, 1891, p. 563, pl. 42, fig. 6; Petrunkevitch, 1929, p. 67, figs. 53-57.

As Dalmas proposed the genus *Heteroonops* for this species in a footnote in 1916, p. 203, it has been overlooked. At that time the female only was known. Petrunkevitch found and described the male from Puerto Rico and figured the palpus.

♀ Cuba; Soledad, 1-11 August 1934, (Darlington)

Oonopoides gen. nov.

Cephalothorax oval, moderately high, thoracic portion sloping abruptly; sternum cordate; labium longer than wide; maxillae twice as long as labium, very slender with out-curved tips; first coxae elongate and posterior coxae globose, legs long, without spines but with inconspicuous hairs in rows on retrolateral side of anterior tibiae; abdomen without a shield, lacking hairs; eyes similar to *Oonops*.

Type *Oonopoides maxillaris* spec. nov.

The genus differs from others in the family by the long, out-curved maxillae. *Telchius* and *Hyttanis* have elongate maxillae, but the former has spines on the legs and the latter a shield on the abdomen. It differs from *Oonops* by the lack of hairs on the abdomen, no spines on the legs, labium longer than wide, the long, out-curved maxillae and the long spinnerets. It differs from *Oonopinus* by the higher cephalothorax, maxillae and the very long spinnerets.

OONOPOIDES MAXILLARIS spec. nov.

Figures 2, 3, 6

Male. Length, 2.0 mm., ceph. 0.8 mm., abd. 1.1 mm.

Cephalothorax pale yellow, oval, narrowing abruptly in front of first coxae, moderately high, cephalic portion level, thoracic sloping abruptly to posterior margin; eyes in a compact group, surrounded by black, a.l.e. largest of the six, separated by a diameter, posterior row slightly recurved and a little longer than first row, p.m.e. oval and touching, separated from p.l.e. by less than a radius, lateral eyes touching, clypeus low, less than a diameter of a.l.e.; mandibles vertical, long, narrowing abruptly at distal third to width of fang, fang long and slender; labium longer than wide; maxillae twice as long as labium, very slender, inclined inward, with the tips abruptly curved outward; sternum heart-shaped, widest between I coxae, IV coxae separated by a diameter; abdomen flesh-color, twice as long as wide, no shield, without hairs, except for a few at base, spinnerets almost as long as IV patella; legs long, 4-1-2-3, pale yellow, without spines, but inconspicuous hairs or bristles in rows on ventral side of I tibia, I coxa longest, trochanter half as long as tibia, posterior coxae almost globose; palpus very simple, tibia and patella about equal length and together about equal to length of femur, no spines on femur and two small bristles on tibia; palpal organ large; guide sickle-shape, embolus a slender dark spine from a slight swelling at tip of bulb.

Holotype ♂ Cuba; Soledad, August 1931, (Banks).

Paratypes 2♂ Cuba; Soledad, 8 July 1932, (Bates and Fairchild).

This species differs from the type of *Oonops* by the long and slender maxillae, hairless legs and abdomen, and the very long spinnerets. The eyes are similar but the head is slightly broader. It differs from *Heteroonops spinimanus* by the eyes, the lack of spines or bristles on the legs, the elongate maxillae, and in the palpus, by the nearly equal tibia and patella; also by the sickle-shaped guide at the end of the bulb.

Sub-family GAMASOMORPHINAE

Genus ISCHNOTHYREUS Simon 1893

ISCHNOTHYREUS PELTIFER (Simon)

Ischnaspis peltifer Simon, 1891, p. 562.*Ischnothyreus peltifer*, Petrunkevitch, 1929, p. 66, figs. 51-52.

This species was originally described by Simon from St. Vincent. It has since been found in Sierra Leone, West Africa and the Philippines. Petrunkevitch reports it from Puerto Rico. A single female was found by C. F. Baker, 12 June at Havana. The male is not known.

Genus OPOPAEA Simon 1891

OPOPAEA DARLINGTONI spec. nov.

Figures 5, 7

Male. Length, 1.4 mm., ceph. 0.5 mm., abd. 0.8 mm.

Cephalothorax oval, nearly as wide as long, (3.4:4), anterior margin narrow and rounded, posterior margin excavate, rather low and flat, shining, no thoracic groove, roughly granular; eyes six, closely grouped, a.l.e. largest, separated by less than a radius, posterior row slightly recurved, p.m.e. oval, touching on long diameter, larger than p.l.e. and separated from them by a line; clypeus low, less than radius of a.l.e.; mandibles vertical, weak; labium fused to sternum, wider than long, tip much narrower than base; maxillae converging; sternum heart-shaped, longer than wide (2.5:2.0), lateral margins lobed, carried between IV coxae in a point, coxae rounded; abdomen oval, (4.0:5.5), dorsum flat, entirely covered by a shield, roughly granular, venter covered by a shield; legs, paler than cephalothorax, with no spines and few hairs; palpus, femur clavate, patella longer than femur, much swollen dorsally, tibia very small and narrow, tarsus almost as long as patella but not as much swollen, tip truncate.

Holotype ♂ Cuba; Maisi, 15-16 July 1936, (Darlington).

This species is much smaller than the genotype, *Opopaea deserticola* Simon, found in many parts of the world, and the palpus is even more swollen than is figured in that species. It is smaller than the *Opopaea lutzi* Petr., first reported from Puerto Rico, and since found at Soledad, and lacks the long curved embolus found in that species.

OPOPAEA LUTZI Petrunkevitch

Opopaea lutzi Petrunkevitch, 1929, p. 61, figs. 42-50.

This species was described from an adult male and two immature specimens from Dorado, Puerto Rico, found by sifting leaves in a sea-grape thicket. Both males and females were taken at Soledad, from dead banana leaves in the garden, 8 August 1931, by L. G. Worley.

Petrunkévitch gives a detailed description and figures the various parts. It is probably congeneric with *Gamasomorpha floridana* Banks. The latter is known from females only, and is much smaller, the p.m.e. are oval, less than half as wide as long, and are touching on the long diameter. The p.m.e. of *Opopaea lutzi* are almost round.

Genus TRIAERIS Simon 1896

TRIAERIS PATELLARIS spec. nov.

Figure 4

Female. Length, 1.7 mm.

Cephalothorax brownish-yellow, four-fifths as wide as long, smooth and shiny, with no hairs, narrowed at anterior margin, moderately high and sloping abruptly to posterior margin, no thoracic groove; eyes grouped in median half, posterior row recurved, p.m.e. largest of the six, round and touching, p.l.e. about half as large as p.m.e., a.l.e. and p.l.e. subequal, a.l.e. separated by more than a diameter and touching p.l.e. and p.m.e.; clypeus half the diameter of a.l.e.; mandibles cone-shaped and inclined slightly forward; labium triangular, base wider than long, tip narrow and deeply emarginate, suture distinct between sternum; maxillae broad and inclined over labium, twice as long as labium; sternum two-thirds as wide as long, strongly convex, with scattered, short hairs, extending between coxae, tip broadly truncate, IV coxae separated by more than a diameter; abdomen half as wide as long, convex, almost covered by a shield, four-fifths the entire length, sides grayish-white, entire abdomen covered by short hairs, most numerous at tip, venter whitish with short hairs; a basal shield surrounding the pedicel, seen from above as a dark line, ventrally extends to epigastric fold, a ventral shield from fold that is shorter than basal; openings of spiracles can not be seen, spinnerets short, surrounded by a chitinous ring; legs, femora enlarged, patellae elongate, I patella almost as long as tibia, 2-2 long ventral spines, I tibia with paired spines, II patella not as long as tibia; epigynum a straight slit.

Holotype ♀ Cuba; Soledad, 1-11 August 1934, (Darlington).

Paratypes 2 ♀ Cuba; Soledad, 1-11 August 1934, (Darlington).

This species is a little smaller than the genotype; it has less color and the dorsal shield is longer. Simon describes *Triarisis stenaspis* with a shield that reaches only a little beyond the middle and with a shining abdomen; also he does not mention the hairs.

Sub-family TETRABLEMMINAE

Genus TETRABLEMMA O. P. Cambridge 1873

TETRABLEMMA CAMBRIDGEI spec. nov.

Figures 8-10, 13

Male. Length, 0.8 mm., ceph. 0.4 mm., abd. 0.5 mm.

Cephalothorax bright orange brown, darker about margin, cephalic portion very high, extending on the same level for more than two-thirds the length of the carapace, ending abruptly and sloping to the posterior margin, no thoracic groove or lateral striae; eyes, four, in a compact group about one-third nearer the anterior margin than the end of cephalic area, anterior eyes largest, oval and almost touching, surrounded by black, second row longer, eyes about half as large as anterior and touching eyes of first row; clypeus sloping outward and equal to one-third the cephalic area; mandibles large, rounded and slightly porrect, fang very short; labium small, at least twice as broad as long, with tip broadly truncate, sternum convex, very broad between I coxae, IV coxae separated by more than two diameters; abdomen reddish-brown, oval, almost as high as long, shield covering the entire dorsum, granulate, with scattered hairs, venter covered with chitinous plates, the largest surrounding the pedicel and covering about two-thirds of the venter; near the base are two clear ovals probably representing the lung sacs; the large plate is followed by a very narrow and shorter plate, and there are two larger plates that extend to the apex and include the spinnerets, the sides have three narrow corneous folds, broken opposite the last ventral plate; between the largest ventral plate and the lateral ridges are rudimentary chitinous dots; legs a shade paler than cephalothorax, rather short, without spines but a few slender hairs in rows, three claws on onychium with three teeth, no tarsal comb, all coxae globose, I pair largest; palpus large, femur plus patella and tibia not as long as cephalothorax, tibia much swollen, more than twice as large as patella; tarsus reduced to a very small piece that does not cover the palpal organ; palpal organ very simple and very similar to the figure of *Tetrablemma medioculatum* Cambridge, the type of the genus.

Female. Length, 1.0 mm.

The color and the shields the same as in the male; the epigynum a pair of simple openings separated by a narrow septum near the posterior margin of the basal plate.

Holotype ♂ Cuba; Soledad, 8 July, 1932. (Bates and Fairchild)

Allotype ♀ Cuba; Soledad, 8 July, 1932. (Bates and Fairchild)

Paratypes 4♂ Cuba; Soledad, 8 July, 1932. (Bates and Fairchild)

The type of the genus, a unique male, is from Ceylon, and was described and figured by O. P. Cambridge in 1873. He considered it so aberrant that he created a new family for it,—Tetrablemmidae,—and suggested that it was related to the Oecobiidae and Dysderidae. Later Simon borrowed the type, and in the *Histoire Naturelle des Araignées*, 1894, 1, p. 573 placed it, probably because it has three claws, in the Theridiidae with *Paculla*, six-eyed spiders from Ceylon, Sumatra, and the Philippines. Petrunkevitch in the *Systema Araneorum*, 1928, places it among the Onopidae.

Dr. C. R. Crosby (1934, pp. 19–23) described a similar spider from Vicosá, Minas Geraes, Brazil, that has the same arrangement of plates but has only two eyes. He believed that it was not a member of the Onopidae because of an unpaired tarsal claw, and on the paired claws, a single, instead of a double series of teeth. In other respects it resembles that family.

At present there are four genera that have many characters in common. The genus *Tetrablemma* now contains three species, the genotype *medioculatum* O. P. Cambridge, from Ceylon, *T. okci* Butler, from Victoria, Australia, (Proc. Roy. Soc. Victoria, n. s., 44, 1932, p. 111) and *T. cambridgei* from Cuba. The other genera have one species each, *Diblemma donisthorpii* Cambridge, (Proc. Dorset Nat. Hist. Club, 29, 1908, p. 188, pl. A, fig. 7) from specimens found in a hot-house in Kew Gardens; *Hexablemma cataphractum* Berland, from East Africa, (Res. Sci. Voy. Allnand and Jennel, Afric. Orient; Arachn., 4, 1920, p. 167), and *Matta hambletoni* Crosby, from Brazil.

The Cuban species differs, however, from the type of the genus by the position of the eyes. In *Tetrablemma medioculatum*, the eyes form a more compact group “on a circular eminence in the centre of the cephalothorax,” and between the eye group and the anterior margin, the cephalothorax is prolonged in a horn, or spur. In *T. cambridgei* the eye area is about one-third distant from the anterior margin; the eyes of the second row are more widely separated and the horn, or spur, is missing so that the clypeus slopes directly from the eyes to the margin. The Ceylon specimen has a long tooth, or spur, near the base of the mandible which projects backward; this, too, is wanting in the Cuban species. The two species are alike in size, color, number and position of the plates, number of eyes, and the extremely simple palpus.

Family CAPONIIDAE

Genus NOPS MacLeay 1839

NOPS GUANABACOE MacLeay

Figures 12, 16

Nops guanabacoae MacLeay, 1839, p. 3, pl. 1, fig. 1.

Nops olivaceus Franganillo, 1931, p. 287.

Male. Length, 6.2 mm., ceph. 2.8 mm. long, 2.0 mm. wide, abd. 3.2 mm.

Cephalothorax chestnut brown, oval, widest between II pair of legs, narrowed in front of the eyes, no dorsal groove and radial striae very faint; two eyes, almost round, separated by less than a diameter and surrounded by black; clypeus more than three times diameter of eye, sloping gently forward and then very abruptly; mandibles small, vertical and attenuate, fang rather wide at base, suddenly becoming slender and bent; labium twice as long as wide, suture between labium and sternum very faint, excavate at basal third, attenuate to a very narrow tip; maxillae curving around labium and tips almost meeting; sternum brown, flat, oval, and a third longer than wide, narrowed to width of labium anteriorly, truncate between IV coxae, deeply emarginate by II and III coxae; abdomen slender, a dull olive-gray, showing indistinctly a few lighter colored chevrons near tip, venter yellowish-gray; legs, 1-4-2-3, little paler than cephalothorax, I coxae about one-half as long as femur with a large lobe just above the sternum, II coxae not quite as long and lobe smaller, anterior trochanters globose, posterior elongate, all legs lacking spines and with very few hairs, tarsi with false suture dividing joint in two segments of which distal is shorter, anterior tarsi with two claws, posterior with three claws, anterior tarsi with a pair of white transparent lobes at base and metatarsi with a membranous lamina on ventral side; palpus, femur with a small stridulating spur at base, palpal organ very simple, protruding from terminal joint which is not enlarged, sides parallel, ventral portion beyond organ partly covered with stiff, coarse bristles.

Allotype ♂ Cuba; Isle of Pines, 1918, (Barbour and Brooks)

♀ Cuba; San Antonio de los Baños, 21 March, 1915, (Barbour and Brooks)

♀ juv. Cuba; Soledad, quarry, August 1931, (Banks and Worley)

♀ Cuba; Jiguaní, Los Negros, February 1913, (Barbour)

In 1936, Franganillo recognized his *Nops olivaceus* as a synonym of *Nops guanabacoae*.

Genus CAPONINA Simon 1891

CAPONINA PELEGRINA spec. nov.

Nops guanabacoae Banks, nec MacLeay, 1909, p. 156.

Female. Length, 10.0 mm., ceph. 4.0 mm. long, 2.5 mm. wide, abd. 6.0 mm.

Cephalothorax bright yellow brown, with a small black spot between the eyes, slightly narrower at anterior than at posterior margin, much narrower in front of eyes, no thoracic groove; two eyes, broad oval, separated by short diameter; clypeus at least three times diameter of eye with a few short, stiff, black bristles near margin, slopes very gently to margin; mandibles covered with stiff black hairs, small, vertical and attenuate, fang very short; labium little longer than broad, attenuate, only slightly excavate at base, fused to sternum; maxillae only little longer than labium, basal half broad, distal half abruptly bent so that tips almost meet, palpi inserted above middle; sternum elliptical, half as wide as long, widest between II coxae, pointed between IV coxae, margins hairy and extended between coxae, IV coxae separated by a diameter; abdomen a dull olive-brown, thickly covered with fine hairs, venter dull yellow; legs, 4-1-2-3, same color as cephalothorax, covered with fine hairs, all coxae covered with hairs, I coxae longest with a large lobe on margin above the sternum, trochanters short and hairy, IV trochanter no longer than I trochanter, no false articulations on tarsi; palpi long, small stridulating spine on inner side of femur, two terminal joints thickly covered with short, stiff hairs; epigynum a straight slit between openings of anterior spiracles.

Holotype ♀ Cuba; Santiago de los Vegas, Banks Coll.

This specimen was identified by Mr. Banks in his *Arachnida* of Cuba as *Nops guanabacoae* MacLeay. It is, however, not a true *Nops*, as it lacks the membranous appendage at the base of the anterior tarsi, the thin membranous lamina extending the entire length of the anterior metatarsi, and the posterior trochanters are not elongated. It agrees perfectly with specimens of *Caponina sargi* Cambridge from Guatemala, even to the position of the small stridulating spine on the femur of the palpus, but until males are found from each locality, the two can be considered distinct species. MacLeay, in his description of *Nops guanabacoae*, calls attention to another species, which is probably this one.

The two species of *Caponiidae* found in Cuba are easily separated. *Nops guanabacoae* is the smaller, more brightly colored and almost

hairless, the legs are smooth and the few hairs on the ventral side are inconspicuous. *Caponina pelegrina* is the larger and dull colored, the legs and abdomen are covered with hairs and the distal half of the maxillae are more attenuate.

Family OECOBIIDAE

Genus OECOBIUS Lucas 1845

OECOBIUS BENNERI Petrunkevich

Oecobius benneri Petrunkevitch, 1928, p. 75, figs. 64-65.

Petrunkevitch states that this is a common species in the West Indies. He found it to be quite numerous on the walls of the University building at Rio Piedras in Puerto Rico, and in collections from St. Thomas and Guadeloupe. It is known only from the female. One was found in a banana leaf from the garden at Soledad, 12 August, 1931, by Dr. L. G. Worley. It differs from the figures of the type by the shorter posterior spinnerets and the larger p.l.e.

♀ Cuba; Soledad, on a banana leaf in garden, 12 August, 1931, (Worley).

Family AGELENIDAE

Genus CHORIZOMMA Simon 1872

CHORIZOMMA ANTILLANUM spec. nov.

Figure 14

Male. Length, 2.5 mm., ceph. 1.4 mm., abd. 1.4 mm.

Cephalothorax dull yellow, two-thirds as wide as long, narrowed in front of I coxae, thoracic groove rather long, and on posterior half of carapace; six eyes, nocturnal, eyes of anterior row largest, separated by less than a diameter, posterior row slightly procurved, eyes subequal, p.m.e. separated by a little more than a diameter and from p.l.e. by about half a diameter; (the spider has recently moulted and the cast of the eye area is pushed back so that six pairs of eyes can be seen); clypeus low, about half a diameter of anterior eye; mandibles vertical, fang groove oblique, inferior margin with a row of minute teeth, superior margin with four, possibly more small teeth about opposite those on inferior margin, fang rather short; labium as long as wide, basal third excavate on margin; maxillae twice as long as labium, with parallel sides, upper exterior margin with a dark carina;

sternum as wide as long, widest between II and III coxae, prolonged in a lobe between IV coxae; abdomen much shrunken, grayish-yellow, without any definite markings but darker at the tip, venter dull yellow; spinnerets, superior spinnerets two jointed, terminal joint about one-half the length of basal; legs broken, colorless, femora without spines, I tibia, ventral, 2-2 spines, metatarsus, ventral, 2-2-2, spines numerous on posterior tibiae and metatarsi but not paired; palpus, no enlargement on femur and patella as in *Chorizomma californicum* Simon, one long spine at tip of patella, tibia shorter than patella with an external and ventral apophysis as figured, palpal organ about as broad as long, bulb bilobed at apex and a bifid process which rests against the ventral apophysis of tibia, embolus arising near the upper part, curving and ending near the bifid tip of the bulb.

Holotype ♂ Cuba; Soledad, 14 July, 1935, (Weber)

This species is smaller than *Chorizomma subterraneum* or *C. californicum*. It differs from the latter in the palpus, and from the former by the relative size of the eyes. The genotype is found in caves of the Pyrenees and southern France. A closely related species is found in Lower California, Mexico, and a third is found in California.

Family HERSILIIDAE

Genus TAMA Simon 1882

TAMA HABANENSIS Franganillo

Figures 11, 17

Tama habanensis Franganillo, 1935, p. —, fig. 35; 1936, p. 39, fig. 17.

Female. Length, 4.2 mm., ceph. 1.6 mm., abd. 2.6 mm.

Cephalothorax very broad, quite flat, pale brown lightly veined with black, a wide marginal stripe of black, thoracic groove long; eye area not raised in a tubercle as in *Tama mexicana* (O. P. Cambridge); anterior row of eyes very strongly recurved, so that anterior margin of a.l.e. and posterior margin of p.m.e. form a straight line, a.m.e. slightly smaller than p.m.e. and separated by more than a diameter, a.l.e. very small, flat, colorless and hardly noticeable in a dorsal view, and together with the p.l.e. on a low tubercle, posterior row recurved, eyes subequal, p.l.e. directed slightly backward, p.m.e. separated by almost two diameters; quadrangle of median eyes higher than wide and only slightly narrower in front; clypeus vertical and about as high as diameter of a.m.e.; mandibles small, fang short and weak; labium

wider than long; maxillae not twice as long as labium and slightly inclined, sides almost parallel and tip truncate; sternum pale, as wide as long, IV coxae separated by a diameter; abdomen pentagonal, pale brown, lightly veined with black and a basal spear-mark which extends over more than half the abdomen, tip prolonged in a cone to the length of the inferior spinnerets, venter pale, terminal joint of spinnerets longer than abdomen; legs, 2-1-4-3, III pair much shorter than others, no indications of false articulation on metatarsi, femora with indistinct black bands on upper side, patellae dark, wide dark bands at middle and tip of tibiae, spines scattered, weak, not paired; epigynum two oval openings, oblique and almost touching.

♀ Cuba; Soledad, Mina Carlota, 1 December 1927, (Creighton)

Family PALPIMANIDAE

Genus OTIOTHOPS MacLeay 1839

OTIOTHOPS WALCKENAERI MacLeay

Figure 15

Otiothops walckenaeri MacLeay, 1839, p. 12, pl. 2, fig. 5.

Female. Length, 5.0 mm., ceph. 2.3 mm., abd. 2.5 mm.

Cephalothorax a deep reddish-brown, much roughened, oval, more than half as wide as long, front rounded, cephalic portion very high and occupying three-quarters of the carapace, thoracic portions slope abruptly to posterior margin, thoracic groove wanting and represented by a deep triangular depression on the thoracic slope; eyes, anterior row straight, equidistant, a.m.e. round, largest of the eight, separated by a radius, a.l.e. about half the diameter of a.m.e., posterior row slightly longer than anterior, procurved, p.m.e. white, flat and oval, separated by a line, (less than half a radius), p.l.e. separated from p.m.e. by more than diameter of p.m.e., lateral eyes subequal and touching; quadrangle of median eyes as wide in front as behind and much higher than wide; clypeus convex and higher than quadrangle; mandibles cone-shaped and vertical, fang groove concealed; labium triangular, slightly longer than wide; maxillae longer than labium, inclined so that tips almost meet, outer margins rounded, palpi inserted above the middle; sternum reddish-brown, convex, granular, carried between coxae, broadly truncate between IV coxae which are separated by more than a diameter; abdomen oval, dark brown, thickly covered with short, stiff hairs, venter dark brown

covered with hairs, a basal shield includes the epigynum; legs without spines, I pair much enlarged, dark brown, coxae twice as long as wide, trochanter rather short, femur enlarged, flattened laterally, patella as long as tibia, much narrowed at base, tibia with short flattened prolateral hairs, tarsus shorter than tibia with a prolateral thick brush of hairs on basal half II, III and IV pairs pale yellow, II patella shorter than tibia, metatarsus with light brush of hairs; palpus, patella small, as long as wide, tibia much swollen, terminal joint with long, stiff hairs on retrolateral side; spinnerets small, surrounded by a narrow chitinous collar; epigynum is a curved slit at the posterior margin of the basal shield that extends from the pedicel to fold, posterior to the epigynum is a narrow chitinous crescent.

Male. Length, 4.6 mm., cephalic 2.0 mm., abdominal 2.5 mm.

The male is like the female but a little smaller; I tibia has a thin brush of iridescent hairs on the prolateral side that is lacking in the female; palpus rather short, pale yellow, tibia little longer than patella, much swollen so that it is wider than long, terminal joint covered with stiff black hairs, palpal organ a simple round bulb, and embolus a straight tube from near the middle.

Allotype ♂ Cuba; Soledad, 1-11 August, 1934, (Darlington)

♀ Cuba; Soledad, 1-11 August, 1934, (Darlington)

♀ Cuba; Soledad, 12 August, 1931, (Worley)

♀ Cuba; Soledad, February, 1925, (Salt)

This species was described from a female found near Havana by MacLeay. Since then, Simon has described a female of about the same size from St. Vincent and Petrunkevitch, a female much smaller from Puerto Rico. Apparently the specific difference is in the quadrangle of the median eyes.

Family PISAURIDAE

Genus PELOPATIS Bishop 1924

PELOPATIS UNDULATA (Keyserling)

Tetragonophthalma undulata Keyserling, 1887, p. 486, pl. 6, fig. 42. (♀; S. Florida; Marx Coll.)

Thanatidius dubius, Banks, *nec* Hentz, 1909, p. 166.

Pelopatis undulata, Bishop, 1924, p. 21, pl. 3, fig. 1, pl. 4, figs. 2-5.

In 1924, Bishop separated the genus *Pelopatis* from *Thanatidius* on the basis of the position of the a.l.e. and the number of spines on the anterior tibiae and metatarsi. All the Cuban specimens seen are immature.

- ♀ Cuba; Havana
♀ Cuba; Soledad, 7 August, 1931, (Worley)
♀ Cuba; Soledad, 8 June, 1925, (Salt)
♀ Cuba; Soledad, 1-11 August, 1934, (Darlington)

Genus THAUMASIA Perty 1833

THAUMASIA CONNEXA spec. nov.

Figure 22

Female. Length, 8.0 mm., ceph. 4.0 mm., abd. 4.8 mm.

Cephalothorax pale, scantily covered with short brown hairs, as wide as long, anterior margin truncate, thoracic groove short and very near posterior margin; eyes cover two-thirds width of head, anterior row recurved, equidistant, a.m.e. larger than a.l.e. and separated by less than a diameter, posterior row longer than anterior, strongly recurved, so that anterior margins of p.m.e. and posterior margins of p.l.e. form a straight line, eyes subequal, p.m.e. separated by about a diameter, p.l.e. on tubercles and directed backwards; quadrangle of median eyes much narrower in front, and by the outer margins, wider than high; clypeus inclined forward and equals a diameter and a half of a.m.e.; mandibles pale, covered with long white hairs and black bristles, fang groove oblique, superior margin with one large tooth and scopula of long hairs, inferior margin with three teeth, two near base of fang, subequal and larger than third tooth, fang evenly curved; labium longer than wide, sides about parallel, basal half of lateral margins only slightly excavate; maxillae parallel, one and a half times longer than labium; sternum pale, as wide as long, ending in a slender point between IV coxae; abdomen oval, two-thirds as wide as long, pale, dorsum clouded with dark gray, venter pale; legs, left II and IV missing, 4-3-1-2, same color as cephalothorax with irregular, wide band on all joints, all trochanters notched, spines, I pair, patella, 1 dorsal, at tip, tibia, 1 dorsal, subapical, 2-2-2, lateral, 2-2-2-2, ventral, distal pair short, others more than twice the diameter of the joint, metatarsus, one half the length of tibia, spines, dorsal O, lateral 2-2, ventral 2-2; epigynum wider than long, a broad median tongue not reaching the fold with strongly convex lobes each side thickly covered with short, white hairs as figured.

Holotype ♀ Cuba; Pico Turquino, 1,500 feet, 25 June, 1935, (Darlington)

Thaumasia marginella (C. Koch) has been reported from Cuba and

several other islands of the West Indies. Petrunkevitch figures the palpus and epigynum in his "Spiders of Porto Rico," and states that specimens from Jamaica are much smaller than those from Brazil. The specimens in the collection are much larger than *Thaumasia connexa* and have a very different epigynum. *Thaumasia pinicola* (Hentz) is known only from one immature female from Punta Gorda, Florida. This immature specimen is about the same size as *T. connexa* and has the same arrangement of eyes and spines, but the legs are much shorter. The Florida specimen is probably about half grown, as it shows no trace of the epigynum.

THAUMASIA MARGINELLA (C. Koch)

Dolomedes marginella C. Koch, 1848, 14, p. 120, pl. 486, fig. 1355.

An immature specimen from Havana may be this species. Petrunkevitch in his "Spiders of Porto Rico," 1929, p. 84, states that it is a widely distributed Neotropical species and it has been reported from many of the islands of the West Indies.

Family LYCOSIDAE

Sub-family LYCOSINAE

Genus LYCOSA Latreille 1804

Three species of *Lycosa* have been described from Cuba by early writers. Lucas in 1857, described *Lycosa insularis*, a female 11.0 mm. long, from near Havana. The figure shows two dark stripes on the cephalothorax with a median pale stripe and marginal ones of about the same width.

In 1877, Keyserling described two species simply from the locality—"Mittleamerica, Cuba." It is not improbable that *Tarentula badia* is the male of *Tarentula fusca* and they may prove to be *Lycosa insularis*. However, detailed descriptions are given as well as figures of the palpus and epigynum.

In 1930, Franganillo described two more very briefly, without figures of the palpus or epigynum, so it is impossible to recognize them.

One hesitates to add another name to this already confused genus, but unfortunately, a pair from Havana do not agree with any description or figure. *Lycosa isolata* has a narrow median pale stripe starting at the anterior eye row, but it is much larger than *Lycosa atlantica* and the palpus and epigynum are distinct.

Lycosa atlantica was described by Marx from a female from Bermuda. It is easily identified, as the median pale stripe is very narrow and extends between the a.m.e. as in *Lycosa helluo* Walck., to which it is, undoubtedly, closely related. The venter is pale gray, the male palpus is very long and slender and the fang has a distinct tooth on the outer side about the middle. This tooth is very small in the female.

LYCOSA ATLANTICA Marx

Figure 18

Lycosa atlantica Marx, 1889, p. 100, fig. 4. (♀; Bermuda)

Male. Length, 7.2 mm., ceph. 4.0 mm., abd. 3.6 mm.

Cephalothorax pale brown with a narrow median pale stripe from the anterior eye row to posterior margin, a submarginal pale stripe wider than the median stripe; eyes, anterior row straight, slightly shorter than second row, equidistant, a.m.e. larger than a.l.e., eyes of second row separated by less than a diameter, and by more than a diameter from p.l.e.; clypeus equal to diameter of a.m.e.; mandibles long, with black bristles, superior margin of fang groove with two teeth and an irregular scopula, inferior margin with three teeth, fang short with a well developed tooth on outer side about the middle; labium as wide as long, deeply excavate at basal third, with a row of stiff dark bristles on front margin; maxillae more than twice as long as labium, sides parallel; sternum oval, two-thirds as wide as long, with short black hairs, IV coxae almost touching; abdomen with a median basal spear-mark about half the length of the abdomen, sides pale, venter pale with a faint darker U-shaped mark; legs, 4-1-2-3, all trochanters deeply notched, pale yellow, somewhat darker at tips, dorsal sides covered with fine dark hairs, spines long, black and conspicuous, I pair, tibia, ventral 2-2-2-2, lateral 2, metatarsus, ventral 2-2-2, lateral 3; palpus, long and slender, femur with a thick retrolateral brush of dark hairs, tibia plus patella longer than femur, tibia very long, terminal joint shorter than tibia and not much longer than patella, palpal organ as figured.

Allotype ♂ Cuba; Havana, August 1931, (Banks)

♂ ♀ Cuba; Havana

Originally described from Bermuda, this species has since been found by Petrunkevitch in Puerto Rico. He had, however, only a female. It is well represented in the Museum of Comparative Zoology collection by males and females from Bermuda and by three specimens from Cuba.

LYCOSA FUSCA (Keyserling)

Figures 23, 24

Tarentula fusca Keyserling, 1876, p. 640, pl. 7, fig. 22.*Lycosa fusca*, Petrunkevitch, 1929, p. 91, figs. 76-79.

Female. Length, 13.0 mm., ceph. 7.0 mm., abd. 6.5 mm.

Cephalothorax with a median pale stripe which does not pass anterior to p.m.e. and which gradually widens from p.l.e. to thoracic groove where it narrows, so that at posterior margin it is about half as wide as between p.l.e., a pair of small dark spots in stripe about opposite II coxae, marginal pale stripe covered with white hairs with an irregular upper margin, black about the eyes and eye area covered with a dense mass of white hairs; eyes, anterior row slightly shorter than second row, equidistant, a.m.e. larger than a.l.e., eyes of second row separated by less than a diameter and from p.l.e. by more than a diameter, p.l.e. about half as large as p.m.e.; clypeus equal to radius of a.m.e.; mandibles black with short black bristles and short white hairs, superior margin of fang groove with three teeth, the middle the largest, inferior margin with three subequal teeth; labium little longer than wide, slightly excavate on sides at base, tip truncate; maxillae twice as long as labium; sternum and coxae black, sternum slightly longer than wide, IV coxae almost touching; abdomen with an indistinct basal spear-mark, with usual narrow pale stripe each side very indistinct at base, venter almost covered with a dark spot that is about as wide as long; legs pale brown without marks, anterior tibiae, metatarsi and tarsi a little darker, legs covered with many dark hairs and bristles and a few white scales, dense scopula on anterior tarsi, metatarsi and distal half of tibiae; palpi, terminal joint almost black; epigynum wider than long, median septum very short and terminal cross piece very long and broad, a circular depression each side of median septum and a smaller dark circle beyond beneath the skin.

Male. Length, 9.5 mm., ceph. 6.0 mm., abd. 4.5 mm.

Cephalothorax with median pale stripe the width of p.l.e. narrowing to about half width at posterior margin, a pair of small black dots in stripe opposite II coxae, pale lateral stripes with irregular upper margins, dark stripes veined with black, black about eyes with crest of white hairs between p.m.e. and p.l.e.; eyes, anterior row about the same length as second row, equidistant, procurved by upper margins, a.m.e. larger than a.l.e., eyes of second row separated by diameter; clypeus about half the diameter of a.m.e.; mandibles almost black

with scattered long bristles and white hairs, superior margin of fang groove with three teeth, middle largest, inferior margin with three sub-equal teeth, fang simple; labium slightly wider than long, margins of basal third excavate; maxillae more than twice as long as labium; sternum dark brown, oval, little longer than wide, IV coxae almost touching; abdomen with usual spear-mark rather indistinct, bordered with pale lateral stripes covered with white hairs which meet and extend to spinnerets, venter black from epigastric fold to spinnerets, sides pale with many dark spots; legs, I pair missing, all coxae dark brown, II pair pale brown with last two joints darker, posterior legs pale; palpus pale, seen from above tibia little longer than patella, from beneath, tibia twice the length of patella, terminal joint little longer than tibia, palpal organ with the characteristic parts, the dark tip below the end of the embolus has a sharp point which extends on the cymbium, but it is much smaller and not triangular as Petrunkevitch figures, (fig. 76). The under side of the cymbium beyond the palpal organ is covered with short hairs, not long and recurved as in *Lycosa isolata*.

♂ ♀ Cuba; Soledad, February, 1925, (Salt)

♂ ♀ Cuba; Soledad, July, August, 1931, (Worley)

♀ Cuba; Isle of Pines, La Ceiba, 1918, (Barbour and Brooks)

♀ Cuba; Matanzas, 1931

♀ Cuba; Jovellanos

Keyserling described this species from a female from the indefinite locality,—“Mittelamerika, Cuba.” As usual, he was most explicit about color and markings. At the same time, he described a male under the name *Tarentula badia* from the same indefinite locality. The only difference between the two, is the black venter in the male. Among the specimens from Cuba there is great variation in size and markings. In some, the venter is black from pedicel to spinnerets; again it is pale, or thickly covered with dark spots; in a few, the median line of white hairs is carried between the a.m.e., but none have been seen with the line continued to the margin of the clypeus. It is not improbable that *T. badia* is the pale male of *T. fusca* and in that case, the name *badia* has priority.

Petrunkévitch, in his “Spiders of Porto Rico,” figures the epigynum of three females. All are very unlike Keyserling’s figure or the Cuban specimens, so that it is not improbable that another species is found in Puerto Rico.

LYCOSA ISOLATA spec. nov.

Figures 19, 26

Male. Length, 14.0 mm., ceph. 8.0 mm., abd. 6.8 mm.

Cephalothorax with a narrow median pale line from the anterior eye row to posterior margin, with margins almost parallel posterior to p.l.e., a mass of white hairs between eyes of second row, sub-marginal pale stripe with irregular margins, wider than median stripe, eyes of second and third rows surrounded by black; eyes, anterior row a little longer than second row, slightly procurved by the upper margins, equidistant, a.m.e. slightly larger than a.l.e., eyes of second row separated by more than a diameter; clypeus as wide as diameter of a.m.e.; mandibles covered with short white hairs but no long bristles, superior margin of fang groove with two small teeth, inferior margin with three subequal, equidistant teeth, fang simple, without tooth on exterior side; labium pale, almost square; maxillae more than twice the length of labium; sternum pale yellow, oval, two-thirds as wide as long, IV coxae almost touching; abdomen dark brown, thickly covered with hairs, a basal spear mark extending to middle, a pale stripe each side of about half the width which disappears about the middle, venter entirely black from pedicel to spinnerets; legs pale yellow, dorsal side of femora covered with short dark hairs so that joint appears darker, scopula on anterior tarsi and distal half of metatarsi, spines, I pair, tibia, ventral, 2-2-2, lateral, 2, metatarsus, ventral, 2-2, lateral, 1; palpus seen from dorsal side, tibia but little longer than patella and terminal joint about one and a half times length of tibia, seen from ventral side; tibia twice as long as patella, ventral side of tarsus beyond palpal organ thickly covered with long hairs with a recurved tip, palpal organ as figured.

Female. Length, 10.0 mm., ceph. 6.0 mm., abd. 5.5. mm.

Cephalothorax bright brown with a faint narrow median pale stripe from anterior eye row, widening at thoracic groove and continuing to posterior margin, a narrow sub-marginal stripe covered with white hairs, black about the eyes; eyes, equidistant, anterior row straight, a.m.e. larger than a.l.e.; eyes of second row separated by about a diameter and from p.l.e. by a diameter and a half; clypeus equal to a little more than a radius of a.m.e.; mandibles dark red brown, covered with bristles and white hairs, superior margin of fang groove with two teeth, inferior margin with three sub-equal teeth, fang short and stout; labium slightly longer than wide, deeply excavate at base and truncate at tip; maxillae parallel; sternum two thirds as wide as long, pointed at tip, IV coxae almost touching; abdomen brown with a darker brown basal

spear mark outlined at base and sides with a pale line, venter pale; legs much broken, brown without any indications of darker rings, scopula on anterior tarsi, metatarsi and distal half of tibiae, spines, I pair, tibia, ventral, 2-2-2, lateral, 1, all shorter than diameter of joint; metatarsus, ventral, 2-2-2, lateral, 0, all very short; epigynum longer than wide, with a long median septum, slightly notched above the middle, cross piece shorter than septum.

Holotype ♂ Cuba; Havana, (Baker)

Allotype ♀ Cuba; Havana, (Baker)

The female has been rubbed, so that the median pale stripe appears wider than in the male, the abdomen is shrunken and the venter pale, not a deep black as in the male. The epigynum is very similar to the figure of *Lycosa dilatata* Cambr. from Costa Rica and Panama, which has been reported by Franganillo from the Sierra Maestra, Cuba. This species is much smaller and lacks the marks on the venter. The figure no. 77 which Petrunkevitch gives for *Lycosa fusca*, 1929, p. 92, is very similar to the Cuban species but it lacks the process on the median septum, and the superior margin of the fang groove has three teeth.

Lycosa isolata can be separated from *L. fusca* by the median pale stripe, which is very narrow in *isolata* and about as wide as the space between p.l.e. in *fusca*, and by the palpus of the male and the epigynum of the female.

LYCOSA RIPARIA Hentz

Lycosa riparia Hentz, 1844, p. 389, pl. 17, figs. 13-15; Chamberlin, 1908, p. 234, pl. 17, figs. 5, 6.

A common spider in the southern part of the United States. A male was found at Soledad, 15 June, 1925 by Salt that was much paler than the typical form and lacks the usual four narrow lines on the venter, but the palpus is the same. The shape of the barb-like spur on the palpal organ is characteristic. An immature female was found at Soledad during February, 1925. Franganillo has not reported it.

Genus ARCTOSA C. Koch 1848

ARCTOSA LITTORALIS (Hentz)

Lycosa littoralis Hentz, 1844, p. 388, pl. 17, fig. 9.

Lycosa cinerea, Chamberlin, 1908, p. 281, pl. 12, figs. 5, 6; nec *cinerea* (Fabr.).

Arctosa littoralis, Gertsch, 1934, p. 7.

Both Banks and Franganillo have reported *Arctosa cinerica* from El Guamá, Cuba. In recent years it has been proved that the European species is not found in America, and the Cuban species is probably *Arctosa littoralis*, which is common in the southern part of the United States.

Sub-family PARDOSINAE

Genus PARDOSA C. Koch 1848

PARDOSA ALBOPILOSA Franganillo

Figures 20, 21, 28

Pardosa albopilosa Frang., 1931, p. 286; 1936, p. 42.

Male. Length, 4.2 mm., ceph. 2.5 mm., abd. 2.0 mm.

Cephalothorax black about eyes, median yellow stripe very vague anterior to the thoracic groove, sides deep brown shading to black, sub-marginal stripe yellow, obscure anterior to I coxae; eyes, anterior row shorter than second row, a.m.e. separated by more than a diameter and a half and from a.l.e. by less than a diameter, larger than a.l.e.; eyes of second row fully two diameters apart; clypeus high, equals nearly two diameters of p.m.e., a narrow yellow line below anterior row of eyes; mandibles black with tips pale yellow; labium wider than long; maxillae slightly converging; sternum dark brown, almost black, IV coxae touching; abdomen dark, almost black with usual basal spear mark very obscure, sides mottled, venter dark gray; legs, coxae almost black, femora dark gray at base, gradually fading so that tips of tibiae, metatarsi and tarsi are yellow, no indications of darker rings, very scant scopula on anterior tarsi, spines, I pair, tibia, ventral, 2-2-2, basal and median very long; palpus dark gray, patella and tibia almost black, terminal joint yellow at tip, seen from above, tibia about twice as long as patella, palpal organ very similar to *Pardosa milvina* (Hentz) but scopus not large, cone-shaped and not covered, lateral tenaculum dark, large and hammer-shaped.

Female. Length, 6.0 mm., ceph. 3.1 mm., abd. 3.0 mm.

Median pale stripe wider than in male and carried to p.l.e., sub-marginal stripe wider and continued to clypeus, black about eyes; eyes same as in male; mandibles, labium and maxillae pale; sternum pale with a dark median forked stripe which fades near labium; coxae pale gray; abdomen much paler than in male, basal mark followed by broken transverse bars on a pale area, sides dark, venter pale; legs much broken; epigynum without distinct lateral ridges in the median

region as in *Pardosa saxatilis* (Hentz), sides slightly angulate about middle, deep lateral depressions.

♂ Cuba; Rio Bayamo.

♂ ♀ Cuba; Havana, Banks Coll.

♀ Cuba; Havana, (Cervera).

Franganillo's description is very short and gives little more than generic characters. As he gives no locality other than "sitios humedos de la isla de Cuba," it is not unreasonable to infer that it is a common species and that he had it from various localities. As the two males seen differ somewhat in color, it is not impossible that the second species described by Franganillo in the same paper, *Pardosa maculata*, is the same.

The male described above is from Rio Bayamo and is much darker than another from Havana. In the latter, the sternum has a dark median forked stripe and the coxae are gray, not black; the palpus has several yellow hairs on the tibia and patella. In a specimen from Lake Worth, Florida, the tibia and patella are thickly covered with yellow hairs, very suggestive of the white hairs found on *Pardosa saxatilis*, but all specimens have the femora dark gray, fading gradually to the pale yellow on tibia and metatarsi.

PARDOSA CUBANA spec. nov.

Figure 27

Female. Length, 4.3 mm., ceph. 2.2. mm., abd. 2.3 mm.

Cephalothorax yellow, eye area black which is continued as two parallel dark stripes from p.l.e. to posterior margin, inner margins irregular, narrow marginal dark line; eyes, anterior row straight, shorter than second row, a.m.e. larger than a.l.e., separated by less than a diameter and from a.l.e. by less than a radius, p.m.e. separated by more than a diameter; clypeus retreating, more than a diameter of a.m.e.; mandibles vertical, three teeth on inferior margin; labium wider than long, tip rebordered; abdomen dark with a pale median stripe broken by cross-bars and dark spots, venter pale; legs, I, II and IV right missing, 4-1-2-3, interrupted dark rings on femora, tibiae and metatarsi, most conspicuous on posterior pairs, spines, I pair, tibia, ventral, 2-2-2-2, apical pair short, others long and overlapping, metatarsus, ventral, 2-2-2, basal and median pairs long; epigynum, area longer than wide, cross piece very wide, median septum short and wide.

Holotype ♀ Cuba; Maisi, 15-16 July, 1936, (Darlington)

This species differs from *Pardosa albopilosa* Franganillo in the very broad cross piece of the epigynum, the smaller size, and the number of spines on the first tibia. It differs from *Pardosa portoricensis* Banks in the very short septum.

Family OXYOPIDAE

Genus OXYOPEIDON O. P. Cambridge 1894

OXYOPEIDON RANA Simon

Hamataliwa grisea Banks, nec Keyserling, 1909, p. 167.

Oxyopeidon cubanum Chamberlin, 1925, p. 128, fig. 41; Petrunkevitch, 1929, p. 103, figs. 84-88.

Simon had both male and female from St. Vincent, but he gave no figures. Petrunkevitch gives a detailed description and figures. *Oxyopeidon cubanum* Chamberlin proves to be the same species.

♂ ♀ Cuba; Trinidad Mountains, Mina Carlota, Marsh, 1925, (Salt and Myers)

♂ Cuba; Coast below Pico Turquino, 30 June, 1936, (Darlington)

OXYOPEIDON TUBERCULATUM Chamberlin

Oxyopeidon tuberculatum Chamberlin, 1925, p. 129, figs. 42-43.

Hamataliwa grisea Banks, nec Keyserling, 1909, p. 167.

This species was based on a female probably two moults from maturity. It is impossible to place it.

Genus OXYOPES Latreille 1804

OXYOPES SALTICUS Hentz

Oxyopes salticus Hentz, 1845, p. 196, pl. 16, fig. 10; Petrunkevitch, 1929, p. 102, figs. 82-83.

This is a common species in the United States as far north as Long Island, New York. It is found in Central America, Brazil, and the West Indies. It is very abundant in collections from Havana and Soledad.

Genus PEUCETIA Thorell 1870

PEUCETIA VIRIDANS (Hentz)

Oxyopes viridans Hentz, 1845, p. 195, pl. 17, fig. 2; Petrunkevitch, 1929, p. 106, figs. 89-91.

A species common to the southern United States, Central America, and the West Indies. It is found in great abundance in collections from Havana and Soledad.

Family SICARIIDAE

Sub-family LOXOSCELINAE

Genus LOXOSCELES Lowe 1831

LOXOSCELES RUFESCENS (Dufour)

Scytodes rufescens Dufour, 1820, p. 203, pl. 77, fig. 5.

Loxosceles rufescens Petrunkevitch, 1929, p. 108, figs. 92-96.

This European species is found in Japan, Madagascar, Mexico, and the southern part of the United States. Petrunkevitch reports it from Puerto Rico. In Cuba, Franganillo reports it from the Sierra de Rangel. It was found in Vilches Cave, Soledad by Banks and Worley during August.

Sub-family SCYTODINAE

Genus SCYTODES Latreille 1904

SCYTODES BLANDA spec. nov.

Figures 25, 29

Male. Length, 4.1 mm., ceph. 2.1 mm., abd. 2.0 mm.

Cephalothorax pale with two pairs of converging dark lines that do not meet at the highest portion of the cephalothorax, irregular dark lines above the lateral margins, highest portion about opposite fourth coxae, thoracic portion slopes abruptly to posterior margin; eyes subequal, anterior eyes almost round, more than a diameter from margin of clypeus, lateral eyes very near margin and widely separated; clypeus inclined forward and equal to more than diameter of anterior eye; mandibles pale with a dark stripe, vertical, with a small dark tooth on median edge, fang small; labium longer than wide, sides in-

clined; maxillae one-third longer than labium, tips pointed and almost meeting; sternum pale, heart-shaped, IV coxae separated by more than a diameter; abdomen pale with a few dark dots in transverse rows, venter pale; legs pale with two parallel lines of dark dots, most distinct on femora; palpus pale, tibia plus patella as long as femur, tibia longer than patella and slightly swollen, bulb short, much broader than long, with embolus constricted soon after origin and tip divided in two flattened lobes as figured.

Female. Length, 5.0 mm., ceph. 2.7 mm., abd. 2.4 mm.

Markings on cephalothorax and abdomen same as on male; epigynum, a pair of widely separated oval openings with median margins heavily chitinized, as in *Scytodes fusca*.

Holotype ♂ Cuba; Maisi, 15-16 July, 1936, (Darlington)

Allotype ♀ Cuba; Coast below Pico Turquino, June, 1936, (Darlington)

Paratype ♂ ♀ Cuba; Soledad, San Jose, 1 August, 1931, (Worley)

Paratype ♀ Cuba; Soledad, 1 April, 1936, (Darlington)

Paratype ♀ Cuba; Soledad, 27 November, 1927, (Creighton)

This species is very close to *Scytodes championi* F. O. Cambridge and probably has been confused with it. It differs, however, by the widely separated lateral eyes, the wider clypeus, and in the palpus by the bilobed tip which lacks the tooth near the constriction. The female *S. championi* has never been described.

SCYTODES FUSCA Walckenaer

Scytodes fusca Walck., 1837, p. 272; Petrunkevitch, 1929, p. 113, figs. 97-98.

A common species in northern South America, the West Indies, and southern Florida. The male is very rare.

♀ Cuba; Havana, (Baker)

♀ Cuba; Soledad.

SCYTODES HEBRAICA Simon

Scytodes hebraica Simon, 1891, p. 568, pl. 42, fig. 14.

Scytodes bajula Banks, *nec* Simon, 1909, p. 156.

Originally described from St. Vincent, Cambridge found this species in various parts of Guatemala. The male is easily separated from others of the genus by the large spines on the sternum. The palpus is very much like the figure of *Scytodes fusca* Petrunkevitch, Spiders of Porto Rico, p. 114, fig. 98.

SCYTODES LONGIPES Lucas

Scytodes longipes Lucas, 1845, p. 73, pl. 1, fig. 1; Petrunkevitch, 1929, p. 116, figs. 99-100.

A common tropical and subtropical spider. It is found on all islands of the West Indies and in all collections from Cuba.

Family PHOLCIDAE

Sub-family PHOLCINAE

Genus ARTEMA Walckenaer 1837

ARTEMA ATLANTA Walckenaer

Artema atlanta Walckenaer, 1837, p. 656; Petrunkevitch, 1929, p. 119, figs. 102-104.

A widely distributed species throughout the tropics. It is the largest of the Pholcids.

♂ Cuba; Havana, (Aguayo)

Genus MODISIMUS Simon 1893

MODISIMUS CONCOLOR spec. nov.

Figures 30, 32-34, 36, 38

Male. Length, 1.6 mm., ceph. 0.5 mm., abd. 1.3 mm.

Cephalothorax almost colorless, slightly wider than long, thoracic groove longitudinal, deep, extending from base of eye turret to posterior margin; six eyes, on a cylindrical turret, each eye heavily ringed with black, a.l.e. largest and separated by more than a diameter, directly behind each a.l.e., and partly on the black pigment, is a pair of small brownish spots resembling eyes, posterior row straight, slightly longer than anterior row, p.m.e. separated by more than a diameter and a half and a little larger than p.l.e.; clypeus higher than eye turret and projecting forward slightly; mandibles with an oblique ridge on basal third, edged with a row of short, graduated black bristles, the usual sharp black tooth at median edge; maxillae curved and meeting in front of labium; sternum wider than long, I coxae widely separated and IV coxae separated by more than a diameter; abdomen pale gray with two converging rows of black dots and many whitish blotches, elongate oval, sides with a few black spots, venter

colorless, with a small black spot anterior to spinnerets; legs very long and colorless, without spines but tarsi covered with rows of hairs; palpus, femur with two ventral apophyses, the one near the tip larger, and seen from below, shows a triangular tooth bordered each side by three stout bristles, tibia almost as long as terminal joint.

Female. Length, 2.0 mm.

Cephalothorax with a broad dark stripe from eye turret to posterior margin; eye turret not as high as in the male but arrangement of eyes the same; mandibles without ridge and row of bristles; sternum pale brown; abdomen globose with two converging rows of dark spots and sides mottled as in male; legs very pale brown, sometimes spotted with black; epigynum large for the size of the spider, heavily chitinized with posterior margin of openings fringed with long hairs or bristles directed inward.

Holotype ♀ Cuba; Soledad, garden, from dead banana leaves, 8 August, 1931, (Worley)

Allotype ♀ Cuba; Soledad, garden, 8 August, 1931, (Worley)

Paratypes ♂ ♀ Cuba; Soledad, garden, 8 August, 1931, (Worley)

Paratypes ♂ ♀ Cuba; Soledad, August, 1934, (Darlington)

This species differs from *Modisimus glaucus*, the genotype, by the two apophyses on the femur of the palpus.

MODISIMUS ELEVATUS spec. nov.

Figures 31, 35, 37

Male. Length, 2.9 mm., ceph. 1.0 mm. long, 1.2 mm. wide, abd. 1.9 mm.

Cephalothorax pale yellow, clypeus dark gray with an irregular median pale stripe, black about eyes and a pale gray median stripe, thoracic groove very deep, extending from base of eye turret to posterior margin, cephalothorax wider than long; eyes eight, turret very high, anterior row procurved, a.l.e. largest of the eight, separated by more than a diameter, a.m.e. very small, separated by about a diameter, posterior row longer than anterior, procurved, eyes sub-equal, p.m.e. separated by more than two diameters and from p.l.e. by a diameter; clypeus higher than turret and inclined forward; mandibles grayish on outer margin with the usual median black tooth, distal third with scattered stiff black spines or spicules; maxillae curved and tips meeting above the labium; sternum gray with a broad median pale stripe, wider than long, widest between I coxae, IV coxae

separated by a diameter; abdomen deeply emarginate at base, globose, bluish-gray with pattern formed by dark dots, leaving pale lines similar to *Modisimus coeruleolineatus* Petrunkevitch, venter pale; legs badly broken, very long, pale yellow, darker at joints; palpus, femur with two apophyses, a large ventral apophysis on distal third with a few stiff bristles and a large basal apophysis at right angles to distal, tibia more than twice the length of patella, terminal joint very short, not covering the bulb, with a long toothed apophysis.

Female. Broken, abd. 2.0 mm. long.

Color same as in male but pattern on abdomen much more distinct; eye turret almost entirely black; mandibles with the usual black median tooth but lacking the black spicules; epigynum midway between pedicel and spinnerets, deeply chitinized and openings fringed with hairs as figured.

Holotype ♂ Cuba; Soledad, San Jose, summit, 31 July, 1931, (Worley)

Allotype ♀ Cuba; Soledad, Vilches Cave under rocks, 14 August, 1931, (Worley)

Paratype ♂ ♀ Cuba; Soledad, Vilches Cave, August, 1931, (Worley)

Paratypes ♂ ♀ Cuba; Soledad, under logs and leaves, 12 August, 1931, (Worley)

Modisimus elevatus is separated from others in the genus by the very high eye turret, spicules on the mandibles and the male palpus.

MODISIMUS ELONGATUS spec. nov.

Figures 39-43

Male. Length, 2.0 mm., ceph. 0.5 mm., abd. 1.5 mm.

Cephalothorax wider than long, pale yellow with a faint median stripe from p.l.e. to posterior margin narrowest at thoracic groove, black about eyes; eye turret comparatively low; six eyes, a.m.e. missing, a.l.e. largest, separated by a diameter, posterior row straight, slightly longer than anterior row, eyes subequal, p.m.e. separated by more than a diameter, and from p.l.e. by less than a radius; clypeus higher than turret and concave below turret; mandibles with a small tooth about the middle with a few black spicules that continue to near the tip, usual tooth on median margin; maxillae curving around labium; sternum pale brown, wider than long, widest between I coxae; abdomen more than three times as long as wide, (11:35), light gray with

paired elongate dark spots in the median area, venter pale with an elongate dark spot in the middle, dark gray about the spinnerets; legs missing; palpus, femur with a ventral apophysis about middle and a smaller one above the base; terminal joint prolonged in a toothed process which is as long as embolus, bulb much swollen, embolus short and sinuate.

Holotype ♂ Cuba; Soledad, March, 1935, (Salt)

This species is very near *Modisimus sexoculatus* Petr. from Puerto Rico. Both have a blunt tooth on the front of the mandibles, but in the Puerto Rican species this tooth is larger and is covered with stiff hairs. The most striking difference, however, is the abdomen which Petrunkevitch describes as the *Theridion* type, higher than wide, while in *Modisimus elongatus* it is very long, slender, and suggestive of the genus *Micromerys*. Both have six eyes and the palpi are very similar.

MODISIMUS OVATUS spec. nov.

Figures 44-47

Male. Length, 2.0 mm., ceph. 0.8 mm., abd. 1.5 mm.

Cephalothorax pale yellow, wider than long, thoracic groove very deep; eye turret moderately high, eight eyes, anterior row procurved, a.m.e. very small and inconspicuous, almost touching, a.l.e. largest of the eight, diameter apart, posterior row slightly procurved, longer than anterior, eyes subequal and equidistant; clypeus higher than turret; mandibles with the usual sharp black tooth at median edge and the distal third covered with black spicules; sternum almost round, widest between III coxae, pale brown with a median pale stripe, IV coxae separated by a diameter; abdomen, globose, greenish-gray with a pale basal spear mark bordered by fine dark dots and covered with fine hairs; legs pale yellow and very long; palpus, femur with a large, sharp ventral tooth at distal third, patella very short, terminal joint much shorter than tibia, so that bulb is not covered, margin fringed and lobed with one fork much longer than the others, bulb swollen and round, embolus slender.

Holotype ♂ Cuba; Havana, Banks Coll.

This species is related to *Modisimus inornatus* Cambr. but differs in the lobes of the cymbium, the embolus, and the ventral tooth on the femur. Both have the a.m.e. very small and inconspicuous, so that they were not mentioned or figured in the original description of *M. inornatus*. The clypeus is not as high as in the Cuban species.

MODISIMUS PAVIDUS spec. nov.

Figures 48, 49

Male. Length, 2.6 mm.

Cephalothorax pale with irregular spots on posterior margin, wider than long, eye turret moderately high, dark reddish-brown, thoracic groove deep; eight eyes, seen from above, anterior row procurved, a.m.e. very small, separated by a diameter, a.l.e. separated by a diameter and a quarter, posterior row longer than anterior, seen from above, straight; p.l.e. largest of the eight and on distinct tubercles, p.m.e. smaller than a.l.e., separated by a diameter and a quarter and from p.l.e. by less than a diameter; clypeus inclined forward, with scattered long hairs or bristles directed upward; mandibles vertical, pale, with a transverse, convex carina at basal third, distal third slightly excavate with an irregular mass of dark spicules above the fang groove, the usual dark tooth at margin, fang weak; abdomen globose, bluish-green, darker at base; legs long; palpus of the usual type, femur with two apophyses, the basal small and the distal much larger, area between deeply excavate and gray, patella very narrow, tibia rounded on dorsal side, terminal joint not as long as wide with a single slender brown apophysis with a curved branch at basal third, the apophysis ends in a sharp point that does not reach tip of embolus; seen from inner side the embolus appears as a flat, black, ribbon-like piece with a truncate tip and a black projection at distal third.

Female. Length, 3.0 mm.

Cephalothorax and eyes same as in male; mandibles pale, long, transverse carina missing and excavate area above fang groove without dark spicules; epigynum dark brown, with lateral lobes, their inner margins parallel, so that epigynum is divided longitudinally in three equal areas.

Holotype ♂ Cuba; South side of Pico Turquino, 3,000–5,000 feet, June, 1936, (Darlington).

Allotype ♀ Cuba; Pico Turquino, 1,500 feet, 25 June, 1936, (Darlington).

Paratype ♂ Cuba; Pico Turquino, 1,500 feet, 25 June, 1936, (Darlington).

Genus *PHYSOCYLUS* Simon 1893

PHYSOCYLUS GLOBOSUS (Tacz.)

Pholcus globosus Taczanowski, 1873, p. 105; Petrunkevitch, 1929, p. 141, figs. 132–135.

This species has been found from Arizona and New Mexico, south to the northern part of South America, and on several islands of the West Indies. It has been reported from various places in Cuba. At Soledad it was found under the eaves of the house during July and August.

Genus SMERINGOPUS Simon 1890

SMERINGOPUS ELONGATUS (Vinson)

Pholcus elongatus Vinson, Aran. Reunion, Madag., 1864, p. 135; Petrunkevitch, 1929, p. 144, figs. 136-138.

Pholcus tipuloides L. Koch, Arachn. Austr., 1872, 2, p. 281, pl. 22, fig. 5.

This is a cosmotropical species and has received many names. Roig states that it is common everywhere in Cuba.

♂ ♀ Cuba; Santiago de las Vegas.

Genus SYSTEMITA Simon 1893

SYSTEMITA COXANA spec. nov.

Figures 51, 53

Male. Length, 1.8 mm., ceph. 0.8 mm., abd. 1.0 mm.

Cephalothorax pale yellow, wider than long, cephalic portion small, sharply defined from thoracic and sloping very gradually to thoracic groove, thoracic groove deep; eight eyes, surrounded by black, eye group slightly raised, a.m.e. punctiform on a black spot, a.l.e. largest of eight, separated by less than a diameter, posterior row procurved, p.m.e. slightly larger than p.l.e., separated by more than a diameter and from p.l.e. by less; quadrangle of a.l.e. and p.m.e. wider in front and as wide as high; clypeus slightly inclined forward, fully three times as high as eye area; mandibles vertical, with a median tooth continuing as a serrate ridge on apical third, suggestive of *Artema*, fang weak; labium fused to sternum, wider than long; maxillae inclined over labium; sternum pale, convex, wider than long, extending between IV coxae as a broad lobe; all coxae much swollen on ventral side, posterior largest, all with a few spicules; abdomen greenish-blue with darker blue spots, globose, smooth, venter pale with fold very near the spinnerets; legs, III right missing, 1-4-2-3, pale with no dark rings or spines, few hairs; palpus of the usual Pholcid type, trochanter with no spur near apex, tibia twice as long as patella with row of four long bristles on dorsal side, tarsus with one long apophysis with bifid tip, almost as long as and parallel to embolus, embolus with a short spine near tip.

Holotype ♂ Cuba; Mountains North of Imias, 3,000–4,000 feet, 25–28 July, 1936, (Darlington).

SYSTEMITA INCERTA spec. nov.

Figures 50, 52

Male. Length, 2.5 mm.

Cephalothorax pale, low and flat, slightly wider than long, (7:6), cephalic portion slightly raised, sharply defined and sloping gradually to thoracic groove, thoracic groove long; six eyes, each one heavily circled with black, eye area oval, wider than long, a.l.e. largest, separated by more than a diameter, posterior row procurved, slightly longer than anterior, p.m.e. larger than p.l.e., separated by more than three diameters and from p.l.e. by almost a diameter, lateral eyes separated by diameter of p.l.e.; clypeus inclined forward, equal to once and a half eye area; mandibles vertical, basal third swollen, ending with a transverse carina, distal half slightly roughened, usual small, dark teeth on superior margin of fang groove at median edge; labium fused to sternum, wider than long; maxillae almost surrounds labium; sternum white, two-thirds as long as wide, IV coxae separated by more than a diameter; abdomen oval, pale with a few colorless hairs, venter pale; legs broken, very long, tarsi short; palpus of the usual Pholcid type, no spur on trochanter, femur with basal apophysis a large round knob, distal apophysis pointed, patella small, tibia with dorsal side rounded, terminal joint not as long as wide, with long apophysis with many branches but longest not as long as embolus, bulb swollen, embolus almost black, flattened and curved towards bulb.

Female. Length, 2.1 mm.

Cephalic portion not as high as in male and eyes of anterior row not as widely separated; epigynum just anterior to middle of the venter, a protruding hood at base, over a large oval clear area.

Holotype ♂ Cuba; Pico Turquino, 1,500 feet, 25 June, 1936, (Darlington).

Allotype ♀ Cuba; South Side of Pico Turquino, 3,000–5,000 feet, June, 1936, (Darlington).

The generic position of *Systemita coxana* and *S. incerta* is doubtful. Simon based the genus on a Venezuelan species that has six eyes, eye area longer than wide, posterior row procurved, mandibles weak with an oblique carina and minute teeth on the fang groove, and an elongate abdomen; the palpus is stated to have no spur on the trochanter, femur with a narrow base, widening to a ventral spur, tibia longer than patella

and a single apophysis on tarsus. The two species probably belong to the same genus, although *S. corana* has minute a.m.e. which are about to disappear and a globose abdomen, and *S. incerta* has very long legs. *Hedypsilus*, another genus with six eyes, the posterior row recurved and a low eye turret, also from Venezuela, is compared with *Modisimus*. The swollen coxae of *S. coranus* is an unusual character in this family and probably occurs in the male only.

Sub-family LEPTOPHOLCINAE

Genus MICROMERYS Bradley 1877

MICROMERYS DALEI Petrunkevitch

Micromerys dalei Petrunkevitch, 1929, p. 150, figs. 144-148.

Leptopholcus delicatulus Franganillo, 1930, p. 15.

Leptopholcus conicus ibid., 1931, p. 286; ibid., 1934, p. 153; ibid., 1936, p. 46.

Male. Length, 3.3 mm., ceph. 0.6 mm., abd. 2.8 mm.

Cephalothorax pale, wider than long, anterior margin truncate, low with no thoracic groove; eyes, a.m.e. small black dots, separated by at least three diameters, other eyes subequal on a low tubercle, in two widely separated groups, connected by a ridge; clypeus vertical, narrow; mouth parts weak; sternum as wide as long; abdomen cylindrical, very long and narrow, pale with four pairs of elongated dark spots, abdomen continued beyond the spinnerets in a short lobe; legs, several missing, very long and slender, tarsi very short; palpus pale, trochanter produced in a long slender spine at an angle to femur; femur from a narrow base, suddenly enlarging, patella short, tibia long and swollen, cymbium with a long L-shaped process, flattened with a dark brown margin, tip truncate, inner margin hyaline with a scant fringe of long hairs, bulb pale, relatively small, less than half as large as tibia, with two very dark processes, one of which is flattened with a serrate margin and ends in a long slender point.

Female. Length, 5.2 mm., ceph. 0.8 mm., abd. 4.2 mm.

Cephalothorax pale, flat and low, wider than long, (7:6), no thoracic groove; eyes as in male but lateral tubercles not as high; mouth parts weak; sternum wider than long, (4:3); abdomen five times as long as cephalothorax, cylindrical and very slender, pale, no markings, with a constriction about the middle, venter pale; abdomen extends beyond the spinnerets; anterior legs missing, legs very long and slender, tarsi short; epigynum covers a large area but because it is so faintly chitinized, it is impossible to trace various parts, possibly because it lacks one moult of maturity.

♂ Cuba; Oriente, Los Llanos, 1,000–2,000 feet, 16–20 July, 1936, (Darlington).

♀ Cuba; South Side of Pico Turquino, 3,000–5,000 feet, June, 1936, (Darlington).

The genus *Leptopholcus* was established by Simon in the Hist. Nat. Araignées, 1893, 1, p. 474, for two species, one from East Africa and the other from Ceylon. It differs from *Micromerys* in the presence of two very small a.m.e. The Cuban specimens have these eyes reduced almost to pin-points. Through the kindness of Dr. Petrunkevitch, immature specimens of *Micromerys dalei* from Puerto Rico have been compared with the Cuban specimens. The palpus agrees perfectly with the figures of *M. dalei*.

Franganillo described *Leptopholcus delicatulus* in 1930 from females collected at Sierra del Cuzco and compared the eyes with the figures of *L. signifer* Simon. The following year, he described a second species, *L. conicus*, from the Sierra de Rangel, and in 1936 he republished the description of the latter in "Los Aracnidos de Cuba hasta 1936" but he failed to mention the first species described. The two are probably the same, as the differences consist principally in the color pattern.

Sub-family NINETIDINAE

NINETELLA gen. nov.

Cephalothorax almost round, convex, with a distinct Y-shaped depression posterior to the cephalic portion; eye area compact, eight eyes, in two groups, six sub-equal eyes and a pair of very minute ones, clypeus high and inclined forward; sternum convex, almost round, posterior coxae well separated; legs long and slender; male with a long, forward projecting tooth on basal half of mandibles.

Type *Ninetella pulchra* spec. nov.

This genus is very similar to *Ninetis* Simon, but has a distinct longitudinal groove and the a.m.e. have moved back.

NINETELLA PULCHRA spec. nov.

Figures 54–57

Male. Length, 1.1 mm., ceph. 0.5 mm., abd. 0.6 mm.

Cephalothorax pale yellow, almost as broad as long, slightly convex, attenuate in front, with a distinct Y-shaped mark which forms the thoracic groove; six sub-equal eyes in two compact groups separated

by a diameter, and a pair of easily overlooked minute eyes close to posterior row of eyes, these minute eyes may be the a.m.e. moved back; clypeus high, at least twice the width of the eye area, inclined forward; mandibles vertical, with a slender, forward projecting process about the middle; mouth parts small and weak; abdomen globose, pale gray covered with long hairs or bristles, venter gray, without markings, spinnerets about midway between epigstrie fold and tip of abdomen; legs, 1-2-3-4, long and slender, with no spines, femora slightly incrassate; palpus, femur slender at base, widening at distal portion with a distinct tooth on ventral side, patella very small, tibia swollen and globose, terminal joint of the usual Pholcid type with one apophysis the length of the bulb.

Female. Length, 1.5 mm., ceph. 0.7 mm., abd. 1.0 mm.

Coloring same as in male, posterior eyes more widely separated, mandibles without tooth; epigynum a rectangular area with a reflex margin each side, each bearing two corneous points, turned back and out, so that the upper point touches the sternum.

Holotype ♂ Cuba; Soledad, Vilches pasture, 3 July, 1932, (Bates and Fairchild)

Allotype ♀ Cuba; Soledad, Vilches pasture, 3 July, 1932, (Bates and Fairchild).

Paratypes 2 ♂ 1 ♀ Cuba; Soledad, Vilches pasture, 3 July, 1932, (Bates and Fairchild).

This species seems to be near *Ninetis subtilissima* Simon from Arabia, but it has a thoracic groove, the small eyes have almost disappeared, and have moved back. The legs are not as long as in the typical Pholcids.

Family DICTYNIDAE

Genus DICTYNA Sundevall 1833.

DICTYNA CUBANA spec. nov.

Figures 58, 62, 63

Male. Length, 1.5 mm., ceph. 0.8 mm., abd. 0.8 mm.

Cephalothorax gray, much darker on cephalic portion, thoracic groove faint; eyes, anterior row slightly recurved, a.m.e. oval and oblique, separated by a little more than long diameter, posterior row slightly procurved so that lateral eyes are touching, p.m.e. separated by a little more than a diameter, and by less than half a diameter from p.l.e.; quadrangle of median eyes narrower in front and as high as

space between p.m.e.; clypeus higher than quadrangle; mandibles long, basal half excavate on inner margin, lower half straight with a chitinous blade-like ridge, a small, sharp tooth directed forward on exterior margin near base, fang short; labium as wide as long and tip narrowed; maxillae inclined over labium; sternum a broad oval, slightly longer than wide, tip not prolonged between IV coxae, a dull yellow with black about the margin; abdomen oval, base extending in a pointed knob over cephalothorax, dark gray with six graduated pale transverse bars, separated by dark lines, those near apex bent like cheverons, venter pale gray, almost white; legs cream-white covered with rows of hairs, calamistrum poorly defined; palpus, patella globose or greatly swollen on dorsal side and only slightly smaller than cymbium, tibia very short with a dark bifid lobe on dorsal side, opposite a small knob at tip of patella, on the outer side a triangular flattened lobe which interlocks with a small triangular lobe on the side of the patella, cymbium but little shorter than palpal organ.

Holotype ♂ Cuba; Soledad, 22 August, 1933, (Weber).

This species is related to *Dictyna floridana* Banks. Both have the patella greatly swollen and the clypeus very high, but the Cuban species is much smaller, the abdominal markings are quite different, the excavate area of the mandibles is smaller, the tibia of the palpus is broader, and the dorsal lobe is a different shape; the cymbium is smaller and shorter. The swollen patella of the palpus distinguishes it from the other Cuban species.

DICTYNA FLAVIPEDES spec. nov.

Figures 59-61

Male. Length, 1.5 mm., ceph. 0.8 mm., abd. 0.8 mm.

Cephalothorax pale brown with a pale median area from p.l.e. to posterior margin, cephalic portion high; eyes, anterior row slightly procurved, equidistant, a.m.e. smallest, separated by a diameter and a half, posterior row procurved so that lateral eyes are touching, equidistant and subequal; quadrangle of median eyes wider behind and as high as space between p.m.e.; clypeus as high as quadrangle; mandibles vertical, two-thirds as long as cephalothorax, excavate on median edge and bowed on exterior margin, fang short; sternum heart-shaped; abdomen with a pale median area, sides dark, venter pale; calamistrum of a few curved hairs on the middle three-fifths of metatarsus; palpus, tibia about as long as wide, much wider

at basal than at distal end, with a sharp basal spine, not bifid, palpal organ of the characteristic type.

Holotype ♂ Cuba; Havana, (Baker), Banks Coll.

Paratype ♂ Cuba; Soledad, (Banks and Worley).

This species is easily distinguished from others by the short tibia of the palpus which has a single basal spine. Undoubtedly it will be found in other parts of Cuba. In 1936, Franganillo described *Dictyna albopilosa* from Cuba and compared it to *D. parietalis* Camb., also reported by Petrunkevitch from Puerto Rico. The figure of the palpus is very indistinct but it shows that the tibia is much longer than wide, and the palpal organ is about two-thirds as long as the cymbium; it therefore differs in these two characters from *D. flavipedes*. Franganillo fails to mention whether the tibial spine is bifid.

Genus SCOTOLATHYS Simon 1884

SCOTOLATHYS CAVATICUS spec. nov.

Figures 64, 67

Female. Length, 2.2 mm., ceph. 1.0 mm. long, 0.6 mm. wide, abd. 1.3 mm.

Cephalothorax pale yellow, darker at front margin, long and narrow, sides almost parallel, sloping gradually to thoracic groove, posterior quarter slopes abruptly, thoracic groove short; six eyes, in two compact groups, each eye heavily ringed with black, posterior row slightly procurved and a little longer than anterior row; p.m.e. separated by about two diameters and from p.l.e. by half a diameter, anterior eyes separated by more than three diameters and almost touching p.l.e.; clypeus less than a diameter of a.l.e.; mandibles large and slightly porrect, little darker than cephalothorax, four small, subequal teeth on inferior margin of the fang groove and five small teeth opposite on the superior margin with a carina at base of the fang; labium longer than wide with rounded margins; maxillae twice as long as labium, inclined towards labium with a sharp angle on outer edge; sternum longer than wide, widest between II coxae, slightly convex with scattered hairs, ending in a point between IV coxae, IV coxae separated by half a diameter; abdomen pale flesh-color with scattered dark hairs, twice as long as wide, venter pale with darker hairs; legs, 4-1-2-3, about same color as cephalothorax, with many hairs, spines, I pair, tibia, ventral, 2-2, median and basal, less than diameter of

joint, lateral, O, metatarsus, ventral, 2-2, small and inconspicuous, all patellae with prominent retolateral lobe; calamistrum a single row of long, fine curved hairs covering more than basal half of IV metatarsus; epigynum two large oblique oval dark areas beneath the skin, separated by a septum with heavily chitinized margins, openings probably depressions each side of the septum.

Holotype ♀ Cuba; Soledad, Vilches Cave, July, 1932, (Bates and Fairchild).

Paratype ♀ Cuba; Soledad, August, (Leavitt).

The generic position of *Scotolathys caraticus* is uncertain. It differs from the genotype, *Scotolathys simplex* by widely separated a.m.e. and spines on the legs, but until a male is found it is best to leave it here.

Family THERIDIIDAE

Sub-family PHOLCOMMATINAE

Genus PAIDISCA Crosby and Bishop 1926

PAIDISCA SIMPLEX spec. nov.

Figure 66

Female. Length, 2.0 mm., ceph. 0.9 mm., abd. 1.2 mm.

Cephalothorax chestnut brown, anterior margin narrowed to half the greatest width, no thoracic groove, cephalic portion not distinct from thoracic; eyes cover entire width of head, anterior row straight by upper margins, a.m.e. smallest of the eight, separated by radius and from a.l.e. by almost a diameter, posterior row slightly procurved, p.m.e. largest of the eight, separated by a radius and from p.l.e. by a diameter, lateral eyes touching and subequal; quadrangle of median eyes much narrower in front and higher than wide; clypeus as high as quadrangle and slightly convex; mandibles vertical, inner margins almost meeting for basal half, then diverging for the oblique fang groove, fang groove long and oblique, superior margin with four small teeth; labium very narrow, one-third width of sternum, suture between sternum and labium very faint; maxillae more than three times as long as labium and inclined over labium; sternum dark brown, convex and granulate, almost as wide as long, (4.5 : 5), widest between II coxae, IV coxae separated by a diameter and a half, sternum carried between coxae and ending as a truncate lobe between IV coxae;

pedicel distinctly corneous; abdomen a pale brownish-yellow, sparingly covered with very stiff hairs, broadly oval; (13 : 10), does not extend over cephalothorax, muscle spots faint, venter pale, ventral furrow very near spinnerets; legs, 1-4-2-3, pale brown, rather short, comb on IV tarsus, tarsi about as long as metatarsi, I femur compressed laterally, no spines; epigynum very near pedicel, seen laterally the anterior portion projects from the plane of the abdomen as a dark curving hood, beneath are widely separated dark sacs and tubes below the skin, the openings apparently in a straight line at the fold.

Holotype ♀ Cuba; Soledad, 1-11 August, 1934, (Darlington).

This small species differs from the genotype, *Paidisca marxi* (Crosby), because of the small epigynum, lack of spines on the first femur and the slightly larger size. The arrangement of eyes is the same, and the sternum is even broader between the posterior coxae.

Genus ULESANIS L. Koch 1872.

ULESANIS AMERICANUS Emerton

Ulesanis americanus Emerton, 1882, p. 28, pl. 6, fig. 1.

This small spider is found from New England south to Florida. An adult female was taken by Dr. Darlington at an elevation of 6,000 feet on Pico Turquino during June 1936. It is the only representative of the genus in North America, but three species have been described from Brazil and Chili by Keyserling and Nicolet.

Sub-family ASAGENINAE

Genus ASAGENA Sundevall 1833

ASAGENA QUADRIMACULATA O. P. Cambridge

Asagena quadrimaculata O. P. Cambridge, 1896, **1**, p. 189, pl. 23, fig. 12; *ibid.*, 1902, **2**, p. 378, pl. 35, fig. 17.

Originally reported from Guatemala, this species has been collected since in Venezuela and St. Vincent. Petrunkevitch did not find it in Puerto Rico and Franganillo has not reported it from Cuba. A dried male was found in the shrubbery at Soledad, 3 August, 1931 by Worley.

Genus COLEOSOMA O. P. Cambridge 1882

COLEOSOMA FLORIDANA Banks

Figures 70, 71

Colcosoma floridana Banks, Can. Ent., 1900, **32**, p. 98.

Coleosoma blandum Keyserling, *nec* Cambridge, 1884, p. 212, pl. 10, figs. 127.

Theridion interruptum Banks, 1908, p. 205, fig. 9.

Lithyphantes oophorus Petrunkevitch, 1930, p. 170, figs. 8, 9.

Male. Length, 1.7 mm., ceph. 0.7 mm., abd. 1.0 mm.

Cephalothorax chestnut-brown, clouded with black about the margin, evenly rounded at each end, thoracic groove wanting but there is a circular depression at the end of the cephalic portion; eyes, anterior row slightly recurved, subequal and equidistant, separated by about a diameter, posterior row straight, eyes equidistant, subequal and separated by slightly more than a diameter; quadrangle of median eyes slightly wider behind and a little wider than high; clypeus convex and higher than quadrangle; mandibles vertical, attenuate and weak; labium very narrow, much wider than long; sternum triangular, very wide between I coxae, IV coxae separated by less than a diameter; abdomen cylindrical, more than twice as long as wide, slightly constricted below the middle, basal portion is much flattened, narrowed, deeply bifid and carried over cephalothorax, the pedicel showing distinctly between the lobes, the depressed portion is carried on the ventral side as a sheath which extends half way to spinnerets, basal shield olive, followed by two large blotches containing irregular white spots, venter more than half covered by shield followed by a black band or spot which does not reach the sides; legs, 1-4-2-3, yellow with a distinct black stripe on prolateral side of each femora at basal half which connects with a black spot on trochanters, tip of tibiae and base of metatarsi of posterior pairs black, no spines on legs but many hairs and long bristles; palpus small and seen from the side, tibia and patella of equal length, palpal organ simple with a strong black process at the tip.

♂ ♀ Cuba; Soledad, garden, August, 1931, (Worley).

The genus *Colcosoma* Cambridge was based on a male from Ceylon, *Coleosoma blandum*. The generic characters are the stridulating cavity at the base of the abdomen which is chitinated, deeply bifid in the middle, and is found only in the male. *Colcosoma floridana* was described from a male from Punta Gorda, Florida, probably recently moulted, as the stridulating plate is not darkened. *Theridion inter-*

ruptum Banks was described from a female, probably one moult from maturity. Keyserling determined a male from Crescent City, Florida, in the Marx Collection as *Colcosoma blandum*.

In the Biol. Centr. Amer., 1895, 1, p. 154, pl. 19, fig. 12, O. P. Cambridge describes also from males, a second species, *Colcosoma flavipes* from Teapa, Tabasco, and Guatemala. It is possible that the Central American species is the same as the one from Florida and Cuba, since it has been reported from the Galapagos Islands. Cambridge states that the Central American species has the abdomen entirely black, and the constriction at the middle is apparently more marked than in Cuban specimens; also the strong black spine is not shown in the figure of the palpus. Both have the black stripes on the femora and the black spot at the tip of the posterior tibiae. Simon states in his report on Spiders of St. Vincent, that *Colcosoma blandum* Camb. is found there.

Genus LITHYPHANTES Thorell 1870

LITHYPHANTES SEPTENMACULATUS Keyserling

Lithyphantes septenmaculatus Keyserling, 1884, p. 141, pl. 6, fig. 88; Petrunkevitch, 1930, p. 169, fig. 6, 7.

Originally described from a female from Florida, this species was found by Petrunkevitch at various places in Puerto Rico. Females are in collections from Havana, Soledad, Isle of Pines, and the Oriente. The male has never been found.

Sub-family LATRODECTINAE

Genus DIPOENA Thorell 1870

DIPOENA CUBANA spec. nov.

Figure 82

Male. Length, 1.8 mm., ceph. 0.8 mm., abd. 1.0 mm.

Cephalothorax pale yellow with dark marginal line and shaded with gray from posterior eye row to thoracic groove, thoracic groove transverse, thoracic portion high, cephalothorax as wide as long, no radial striae; eyes, anterior row procurved; a.m.e. carried forward on a lobe, slightly larger than a.l.e., separated by almost two diameters, and from a.l.e. by a radius, posterior row straight or a little recurved,

eyes equidistant, p.m.e. largest of the eight and separated by less than a diameter, lateral eyes touching; quadrangle of median eyes wider in front and not as high as wide; clypeus vertical, higher than quadrangle; mandibles vertical, attenuate and weak; labium pale, very narrow, apparently fused to sternum; maxillae surrounds labium; sternum pale with a narrow marginal black line, triangular, wider than long, IV coxae separated by more than a diameter; abdomen globose, pale, with a median row of black spots and larger lateral spots, and scattered small bristles from corneous pits, venter black from pedicel to fold, a black ring around spinnerets, pale gray between fold and spinnerets; legs pale without markings, patellae with bristle at tip, tibiae, dorsal, 2 long bristles, basal and median, I tibia, prolateral, 3 long bristles; palpus short, patella and tibia of equal length; free parts of palpal organ at distal half, embolus black, tip, after an abrupt turn, rests against a broad white lobe which reaches the tip of cymbium, on each side are smaller obtuse lobes.

Holotype ♂ Cuba; Soledad, August, 1931, (Banks).

The genus *Dipoena* is widely distributed, but no species have been reported from Cuba. In 1897, Simon described three species from St. Vincent, from two males and a female. *Dipoena cubana* differs from these because of the lack of rings on the legs and the markings on the abdomen.

Genus LATRODECTUS Walckenaer 1805

LATRODECTUS GEOMETRICUS C. Koch

Latrodectus geometricus C. Koch, 1841, 8, p. 117, pl. 284, fig. 684; Petrunkevitch, 1930, p. 175, figs. 14-16.

A cosmotropical species known only from the female. A few specimens have been found at Havana.

LATRODECTUS MACTANS (Fabricius)

Aranea mactans Fabricius, 1792, 2, p. 410; Petrunkevitch, 1930, p. 172, figs. 10-13.

This species is found in all parts of the United States, Central and South America, and the West Indies. It is very common in the southern states and in some parts of the West Indies. It shows great variation in the amount of color on the abdomen. It has been reported from all parts of Cuba.

Sub-family ARGYRODINAE

Genus CONOPISTHA Karsch 1881

CONOPISTHA AMERICANA (Tacz.)

Ero americana Taczanowski, 1873, p. 57.

Argyrodes argentiola O. P. Cambridge, 1894, p. 128, pl. 16, fig. 4.

Argyrodes aurae ibid., 1896, p. 207, pl. 26, fig. 1.

Argyrodes americana F.O.P. Cambridge, 1902, 2, p. 403, pl. 38, fig. 4; Petrunkevitch, 1930, p. 185, figs. 27, 28.

First described from a female from Uassa, French Guiana, this little *Conopistha* has been found in Central America, Brazil, and many of the islands of the West Indies. In the male, the clypeus is vertical, and the transverse groove has no lateral excavations. Excellent figures are given in the Biol. Centr. Amer., and by Petrunkevitch.

CONOPISTHA CAUDATA (Tacz.)

Ero caudata Taczanowski, 1873, p. 58.

Argyrodes caudatus, Keyserling, 1884, p. 198, pl. 9, fig. 119; Petrunkevitch, 1930, p. 182, figs. 23-26.

A male of this species was found in the garden at Soledad during May 1936 by Dr. Darlington. It belongs to the section of the genus which has a rounded tip to the palpus. Petrunkevitch describes his specimens from Puerto Rico as distinctly pink with small silver spots. The Cuban male is black with very few silvery spots, but it has the characteristic protuberances on the abdomen and the lobe beneath the eyes with the mass of upturned hairs.

CONOPISTHA ELONGATA spec. nov.

Figures 68, 69, 75, 76

Male. Length, 3.2 mm., ceph. 1.4 mm., abd. 2.0 mm.

Cephalothorax brown, almost twice as long as wide, horn starts from the margin of clypeus and ends in an obtuse knob below the eye tubercle, eyes, a.m.e. largest, separated by less than a diameter at tip of the horn, p.m.e. at base of the horn and separated by more than a diameter, lateral eyes subequal, contiguous and behind p.m.e. so that the posterior row is strongly recurved; quadrangle of median eyes almost square; sternum and mouth parts brown; abdomen silvery with a median dark stripe from base to rounded apex, carried beyond spinnerets, and dorsum on the same plane as cephalothorax, venter

brown, with wide margin of darker brown with deep indentations in front of spinnerets, two pairs of silvery spots near tip, spinnerets nearer base than tip; legs, I pair very long, femur bent, each joint darker at tip; palpus, patella swollen, one half as long as femur, tibia about one-third as long as patella, tip of cymbium very broad and deeply notched, embolus small and inconspicuous, heavy black piece in lobe, thick and heavy with a sharp hook on inner margin.

Female. Length, 3.0 mm., abd. 2.4 mm. long, 2.6 mm. high.

Cephalothorax chestnut-brown; eyes, anterior row recurved, a.m.e. largest of the eight, carried forward on a low lobe, separated by a diameter and a half, posterior row straight, eyes equidistant, p.m.e. separated by a diameter and a half, lateral eyes touching; quadrangle of median eyes almost square; clypeus higher than quadrangle with a deep groove below anterior row of eyes; abdomen globose, with a small cone projecting backwards, rather than upwards, with a median dark stripe that extends to tip of cone and a narrow dark cross-bar at base of cone, remainder of dorsum silvery, large dark lateral spots as in *Conopistha jucunda* O. P. Cambr., venter pale yellow with a pair of silvery spots anterior to spinnerets; legs, I pair missing, femora pale with a pair of dark lateral lines, tibiae, darker with broad dark rings at base and at tip; epigynum a large, truncate lobe protruding from plane of venter with free half brown and basal portion black, impossible to see any structure.

Holotype ♂ Cuba; Soledad, garden, 19 August, 1931, (Worley).

Allotype ♀ Cuba; Soledad, garden 19 August, 1931, (Worley).

This species belongs to the group with a horn in the male between the margin of the clypeus and the eye area. It is much larger than *Conopistha nephilae* (Tacz.) The cephalothorax is more elongate, and in the female the cone on the abdomen is short and extends backward. Both sexes have the median dark stripe and the large dark spot as in *C. jucunda* (O. P. Cambr.) The eye arrangement is similar to *C. argentata*, originally described from Ceylon and later identified from Madagascar and the Amazon. F. O. P. Cambridge reports specimens of this species from Mexico, identified by O. P. Cambridge as *A. argentatus*, but it is not improbable that these are distinct from the species found in Ceylon.

Franganillo has identified *C. jucunda* from Cuba and has described a new species, *A. cylindricus* from the Oriente with the abdomen lacking any dorsal markings and with a similar abdominal process. His figure of the palpus is from a photograph and the parts are impossible to distinguish.

CONOPISTHA NEPHILAE (Taczanowski)

Argyrodes nephilae Tacz., 1873, p. 51; Keyserling, 1884, p. 184, pl. 8, fig. 110; Petrunkevitch, 1930, p. 179, figs. 19-22.

Taczanowski described this species from specimens from Uassa, French Guiana, but he did not figure it. Keyserling undoubtedly had the type, and his figures must be considered as based on the type material. The species is common in the southern United States, Bermuda, Guiana, Brazil, Peru, and is reported from most of the islands of the West Indies. It is abundant in the garden at Soledad.

CONOPISTHA OBTUSA (O. P. Cambridge)

Argyrodes obtusus O.P. Cambridge, 1880, p. 338, pl. 30, fig. 17; F.O.P. Cambridge, 1902, 2, p. 403, pl. 38, fig. 3; Petrunkevitch, 1930, p. 187, figs. 29-32.

Several males were taken in the garden at Soledad by Worley during August, 1931. All the specimens were dark and the abdomen long, rather than rotund, but the tip of the abdomen shows three small black tubercles as figured by O. P. Cambridge in 1880 and again more fully in the *Biologia*. The type is from the Amazon, but it has been found since in Guatemala and by Petrunkevitch in Puerto Rico.

CONOPISTHA TRIGONUM (Hentz)

Theridium trigonum Hentz, 1850, p. 280, pl. 9, figs. 24, 25.
Argyrodes trigonum, Emerton, 1882, p. 23, pl. 5, fig. 1.

This species is found all over the United States and Mexico. Petrunkevitch did not find it in Porto Rico.

♂ ♀ Cuba; Soledad, garden, 10 August, 1931, (Banks).

Genus RHOMPHAEA L. Koch 1872

RHOMPHAEA REMOTA spec. nov.

Figure 74

Male. Length, 7.0 mm., ceph. 1.2 mm., I femur 5.2 mm.

Cephalothorax pale yellow with lateral margins and area posterior to thoracic depression shaded with gray, dark converging stripes from

p.m.e. to depression and from a.m.e. to margin of clypeus, thoracic depression transverse and one-third distant from posterior margin; eyes on a low, flattened tubercle, anterior row recurved, a.m.e. separated by more than a diameter and touching the much smaller a.l.e., posterior row procurved, p.m.e. and a.m.e. subequal, lateral eyes touching and subequal; quadrangle of median eyes slightly narrower behind and as high as wide, distinct groove below anterior row of eyes; clypeus slightly convex and protruding, higher than quadrangle; mandibles weak, pale with a continuation of a dark stripe from the clypeus; labium triangular and fused to sternum; sternum slightly convex; abdomen silvery, with indistinct brown lateral stripes and scattered small black dots, post-abdomen prolonged in a cylindrical tubercle nearly four times the length from pedicel to spinnerets; legs much broken, III pair only complete, tibia longer than metatarsus and metatarsus longer than tarsus, I femur with a narrow dark lateral line; palpus, femur slightly longer than cephalothorax, tibia twice the length of patella and almost twice the length of tarsus, palpus very simple as figured.

Holotype ♂ Cuba; Trinidad Mountains, Buenos Aires, 2,000–2,500 feet, 9 May, 1936, (Darlington).

This species belongs to *Rhomphaca* as defined by Simon in the Histoire Naturelle des Araignées, rather than *Ariamnes* because the clypeus is distinctly inclined forward and the tibiae are longer than the metatarsi. Possibly it may be the species that Franganillo has identified as *Ariamnes flagellum* Dol., which is from the East Indies. Franganillo has also reported *Rhomphaca projiciens* Cambr. from Oriente. This species in the male, has a long process from the eye area, as in *Argyrodes*, and in both sexes the tip of the abdomen has a small spine.

Genus SPINTHARUS Hentz 1850

SPINTHARUS FLAVIDUS Hentz

Spintharus flavidus Hentz, 1850, p. 284, pl. 10, fig. 8; Emerton, 1882, p. 28, pl. 5, fig. 7.

A common species from Massachusetts southward. It is found in Mexico, Guatemala, and Panama. Simon had it from St. Vincent and Petrunkevitch records it from Puerto Rico. Both males and females have been found at Soledad and the Trinidad Mountains by Salt and Darlington, and from the south side of Pico Turquino by Darlington.

Sub-family THERIDIINAE

Genus ACHAEA O. P. Cambridge 1882.

ACHAEA LUCULENTA spec. nov.

Figures S3, S4

Female. Length, 2.0 mm., ceph. 0.8 mm., abd. 1.3 mm.

Cephalothorax orange yellow, shining, rather low, sides evenly rounded, anterior margin less than half the greatest width, no thoracic groove; eyes almost cover the width of the head, anterior row slightly procurved, subequal, a.m.e. dark, on a lobe that projects forward slightly, separated by a diameter and a half, and from a.l.e. by half a diameter, posterior row straight by upper margins; p.m.e. slightly the largest of the eight, separated by a scant diameter and from p.l.e. by more than a diameter, lateral eyes subequal and touching; quadrangle of median eyes wider in front and as high as wide; clypeus convex and as high as quadrangle; mandibles yellow, no boss, vertical, cone-shape, fang groove short, impossible to see the teeth; labium wider than long, tip rounded; maxillae twice as long as labium, slightly inclined, tips straight and black; sternum yellow, almost as wide as long, widest between I coxae, ending in a broad truncate lobe which extends between IV coxae, so that the latter are separated by more than a diameter; abdomen rose-colored, a broad oval, base narrow and slightly notched, widest in posterior half, extending in a cone above the spinnerets so that above the spinnerets the abdomen is four-fifths as high as long, dorsum and sides with long colorless hairs, about the cone are pale converging lines, venter little paler than dorsum, colulus present, spinnerets form a small compact group; legs, 1-2-4-3, not differing greatly in length, coxae and trochanters white, other joints dark gray with rows of long hairs or bristles, no spines, tarsi shorter than metatarsi, comb on IV tarsus of 5 or 6 slightly curved bristles; epigynum a rather small convex area with a chitinized concave opening near the anterior end, below can be seen faintly the darker tubes beneath the skin.

Holotype ♀ Cuba; Ciénaga de Zapata, Central Cavadonga, 16 September, 1936, (Davenport).

This is a very strikingly marked species with a yellow cephalothorax, rose abdomen and almost black legs. The generic position is doubtful. The genus *Achaea* was described from a male by O. P. Cambridge in 1882 in the Proc. Zool. Soc. London, p. 423 as *Achaea insignis*, which was afterwards identified as *Argyrodes trapezoides* Tacz. The genus is

separated from *Theridion*, *Chrysso* and *Thwaitesia* by the very large a.m.e. that are carried forward on a lobe. This may be a sexual character for in the same paper, Cambridge describes a female as *Thwaitesia? diversa*, and he failed to mention the size of the a.m.e., although he notes the eyes of the posterior row. It is therefore, possible that they were not conspicuously large. Keyserling in the Theridiidae, 1884, 1, p. 102, identifies this species as the female of *Achaea insignis*, for he probably saw the Cambridge and Taczanowski types. He also re-described the genus. However, he does not stress the size of the a.m.e. and therefore the difference may be sexual rather than generic. F. O. P. Cambridge in the Biol. Centr. Amer., 1902, 2, p. 400, knew the genus from two species only, both males. This species differs from the typical members of *Theridion* by the broad lobe at the end of the sternum that extends between the IV coxae, a character never found in that genus.

Genus ANELOSIMUS Simon 1891

ANELOSIMUS STUDIOSUM (Hentz)

Theridion studiosum Hentz, 1850, p. 275, pl. 9, fig. 5.

Anelosimus studiosum, F.O.P. Cambridge, 1902, p. 395, pl. 38, figs. 16, 17.

S. C. Bruner took a female of this social spider at Sierra de Cobre. It was described from South Carolina and Alabama, and has been found in many of the southern states. F. O. P. Cambridge reports it from Mexico, Guatemala, Colombia, Venezuela, Peru, Brazil, and from St. Vincent. Petrunkevitch did not find it in Puerto Rico.

Genus CHRYSO O. P. Cambridge 1882.

CHRYSO ALBOMACULATA O. P. Cambridge

Figures 78, 81

Chrysso albomaculata O.P. Cambridge, 1882, p. 429, pl. 30, fig. 6; Keyserling, 1884, p. 152, pl. 7, fig. 94.

Steatoda albomaculata, F.O.P. Cambridge, Biol. Centr. Amer., 1902, p. 385, pl. 36, figs. 18, 19.

Female. Length, 2.4 mm., ceph. 0.8 mm., abd. 1.7 mm. long, 1.2 mm. wide.

Cephalothorax a bright brown with a darker U mark on posterior half, anterior margin about half the greatest width, sides evenly

rounded, thoracic groove a transverse depression; eyes cover width of head, anterior row recurved, a.m.e. largest of the eight, separated by more than a diameter and from a.l.e. by half a diameter, posterior row straight, eyes subequal and equidistant, lateral eyes touching; quadrangle of median eyes wider in front and not as high as wide, a groove below anterior row; clypeus convex and about as high as the quadrangle; mandibles vertical, cone-shaped, fang groove short; labium very narrow, about one-third width of sternum and fused with it; maxillae start near tip of labium, twice as long as wide and reach the mandibles, tips truncate and black; sternum dark brown, triangular, almost as wide as long, extending between IV coxae as a broad lobe, so that coxae are separated by more than a diameter; abdomen very much swollen, two-thirds as wide as long and almost as high as wide, carried beyond the spinnerets, tip truncate and extending as a thick tubercle that projects upward and backwards, a dull brown, with paired lemon-yellow spots from base to tubercle, basal pair fused, sides with yellow elongate spots, tubercle paler with tip truncate and black, venter dull brown, impossible to see openings of spiracle; legs, 1-4-2-3, pale with tips of tarsi and metatarsi darker, last two joints covered with fine hairs, no spines, tarsal comb on IV tarsus of 6 or 7 bristles; epigynum slightly convex, openings two ovals, separated by a rather wide septum, posterior margin of ovals faintly defined.

Male. Length, 2.0 mm., ceph. 0.8 mm., abd. 1.3 mm.

Cephalothorax bright brown, darker about the depression, five-sixths as wide as long, sides evenly rounded, anterior margin less than half the greatest width, thoracic groove a depression; eyes, anterior row strongly recurved, a.m.e. carried forward on a lobe, largest of the eight, separated by a diameter, posterior row straight, little longer than anterior, p.m.e. larger than p.l.e., separated by less than a diameter and from p.l.e. by more than a diameter, lateral eyes touching; quadrangle of median eyes wider in front and not as high as wide, a deep groove below anterior row; clypeus convex, as high as quadrangle; mandibles cone-shaped, weak, fang groove short; labium, maxillae and sternum same as in female; abdomen much smaller than in female, not extending beyond the spinnerets and the tubercle reduced to a round lobe so that abdomen is much higher at the spinnerets than at the base, yellow spots smaller and more separated but with black spot at tip of lobe as in female, venter pale, fold almost at middle of abdomen; legs same as in female; palpus short but terminal joint large, both patella and tibia very short, cymbium two-thirds as

wide as long, and when in place, the embolus appears as a black circular loop in basal half, starting about the middle, curving downward, and ascending as a slender black tube with tip at end of cymbium supported by the conductor.

♂ ♀ Cuba; Soledad, garden

O. P. Cambridge named the genus *Chrysso* in 1882 with this as the genotype from material collected by Traill on the Amazon. It is separated from *Theridion* by the prolongation of the abdomen, and he compared it to *Conopistha*. Two years later, Keyserling redescribed and figured it in *Die Spinnen Amerikas, Theridiidae*, 1884, **1**, p. 385, pl. 36, figs. 18, 19. He stated that he had seen specimens from Georgia, Florida, and Brazil. In 1902, F. O. P. Cambridge in the *Biol. Centr. Amer.*, treated this genus as a synonym of *Steatoda*, and figured the palpus and epigynum but gave no description.

The Cuban specimens do not agree perfectly with the figures given by Keyserling and Cambridge. Both figure the epigynum as a plain oval opening, with the upper margin concave. In the Cuban specimens the area is convex, the upper margin is convex and forms a narrow depression above the two ovals. It is not an uncommon species in the garden at Soledad, but has not been found in collections from other places.

Genus EPISINUS Latreille 1809

EPISINUS GRATIOSUS spec. nov.

Figure 65

Female. Length, 3.5 mm., ceph. 1.2 mm., abd. 2.5 mm. long, 2.0 mm. wide.

Cephalothorax pale yellow, heavily shaded with brown, rather low, almost as wide as long, thoracic depression deep as a recurved line, anterior radial striae distinct; eyes on a low tubercle and carried forward slightly, anterior row strongly recurved, a.m.e. diurnal, separated by more than a diameter, and from the smaller a.l.e. by about a radius, posterior row a little longer than anterior, slightly recurved, p.m.e. largest of the eight, oval, separated by less than short diameter and from p.l.e. by a radius, lateral eyes almost touching, p.l.e. larger than a.l.e., posterior ones heavily ringed with red; quadrangle of median eyes slightly wider in front and higher than wide; eye area separated from clypeus by a groove; clypeus convex, not as high as quadrangle; mandibles vertical, small and weak, no boss, fang groove

short, lower margin with a row of short black hairs; labium more than twice as wide as long and fused to sternum; maxillae three times longer than labium, slightly inclined, anterior margins straight; sternum shield-shaped, two-thirds as wide as long, tip rounded, IV coxae separated by more than a diameter; abdomen brown, mottled with white, base very narrow; greatest width one-fourth distance from spinnerets, where it is produced in a pair of low, widely separated tubercles, a few scattered spindle-shaped bristles or slender spines at base and on sides, venter pale, spinnerets at end of a small cone continued beyond tip of abdomen, colulus small but distinct; legs, 1-4-2-3, very unequal in length, I pair very long, femora pale at base, dark brown at distal half, tibiae and metatarsi with wide median and distal bands, I femur bent, spindle-shaped spines at tips of patellae and near base of tibiae, IV tarsus with comb of eight curved bristles; epigynum dark brown, with a transverse oval opening at anterior end, followed by a convex area, showing a pair of dark oval sacs beneath the skin.

Holotype ♀ Cuba; Oriente, Pico Turquino, 1,500 feet, 25 June, 1936, (Darlington).

This species is very near *Episinus putus* Cambridge from Mexico and Panama. It lacks the hairs on the lateral tubercles of the abdomen, and the oval at the base of the epigynum is much smaller. In the description of *Episinus putus* the spindle-shaped spines on the patellae and tibiae are not mentioned. *Meotipa clementina* Petrunkevitch belongs to the same group, but it is smaller and the quadrangle of median eyes is square.

Genus MEOTIPA Simon 1894.

MEOTIPA CLEMENTINA Petrunkevitch

Figures 79, 80

Meotipa clementina Petrunkevitch, 1930, p. 212, figs. 61, 62.

Male. Length, 2.5 mm., ceph. 1.0 mm., abd. 1.5 mm.

Cephalothorax pale, with a reddish-brown median stripe which includes the eye turret and gradually fades at posterior margin, in this stripe in front of the depression are two pairs of pale spots, probably bristle scars, and in a lateral view there are several very long bristles directed forward towards the eye turret, two pairs of reddish spots above the II and II coxae and a narrow marginal dark line, cephalothorax very nearly as wide as long with sides evenly rounded, thoracic

groove a deep depression; eyes distinctly raised above the plane of the cephalothorax on a turret and carried forward, anterior row strongly recurved, a.m.e. diurnal, surrounded by black, largest of the eight, separated by more than a diameter and almost touching a.l.e., posterior row straight, eyes subequal and equidistant, lateral eyes touching, all eyes but a.m.e. surrounded by red; quadrangle of median eyes wider in front and as high as wide; clypeus vertical, as high as quadrangle; mandibles vertical, very weak and small; labium very small and probably fused to sternum; maxillae long, extending slightly beyond mandibles, tips widened with a straight black edge; sternum pale, triangular, slightly convex, extending between IV coxae which are separated by more than a diameter; abdomen has been injured so that it is impossible to trace color pattern, if any, but apparently pale with cream-color blotches, and a pair of dark lateral marks on posterior third, lacking the protuberance found in the female, venter a dull brown, margined with a darker brown stripe; legs, 1-4-2-3, I pair very long, pale, all femora and tibiae with wide dark rings at middle and apex, with fine hairs in lines, spines, patellae, O, tibiae, dorsal, 1-1, median and distal, metatarsi, O, metatarsi longer than tibiae, tarsal comb of 5 or 6 small bristles; palpus very long, femur as long as cephalothorax, patella twice as long as tibia and terminal joint as long as patella, cymbium near tip is divided to form a spine-like projection on side opposite to the embolus which protrudes above the palpal organ, bulb much contracted in basal half, embolus arises from near base, follows the contour of the cavity, makes a sharp right angle turn, and ends as a free, very slender tip near the end of the cymbium between the two points, on the tip of the cymbium are two large spines, one parallel to the longest point, and the other projecting at an angle.

Allotype ♂ Cuba; Soledad, April 1936, (Darlington).

2 ♀ Cuba; Soledad, April 1936, (Darlington).

♀ Cuba; Soledad, (Darlington).

The genus was established by Simon for two species, one from India and the other from the Philippines. Petrunkevitch described this species from a female taken with a cocoon from under a leaf at Bayamon, Puerto Rico. Three females and a male have been found at Soledad. The females have very little color, and the eye group is not raised on a turret as in the male; the cephalothorax is not as wide in proportion, but it has the same row of bristles directed forward in the dark stripe from the thoracic depression to the eye area.

Genus STEMMOPS O.P. Cambridge 1894

STEMMOPS DARLINGTONI spec. nov.

Figures 87, 89

Female. Length, 2.1 mm., ceph. 1.0 mm., abd. 1.2 mm.

Cephalothorax pale brown with a narrow black line about margin, oval, slightly wider than long, low and flat, cephalic portion not distinct from thoracic, no thoracic groove, anterior more pointed than posterior margin; eyes closely grouped and surrounded by black, eye area slightly raised, anterior row straight by upper margins, a.m.e. smallest of the eight, separated by less than a radius and almost touching a.l.e., a.l.e. twice diameter of a.m.e., posterior row slightly procurved, so that lateral eyes are touching, p.m.e. largest of the eight, separated by a line and almost touching p.l.e.; lateral eyes subequal; quadrangle of median eyes higher than wide and wider behind; clypeus not quite as high as quadrangle, slightly inclined forward, front margin pointed; mandibles small and vertical, fang small and weak; labium very narrow, suture distinct between sternum; maxillae inclined over labium, broad, tips almost meeting; sternum yellow, triangular, widest between II coxae and ending in an obtuse point between IV coxae, slightly convex, hairy, margins dark, IV coxae separated by more than a diameter; abdomen very dark gray, with many long hairs, each from a corneous pit, oval, three-quarters as wide as long, venter pale gray, outlined by a pair of paler lines from lung slits which converge to spinnerets, colulus very small; legs, 1-4-2-3, moderately long, bright brown, covered with rows of fine hairs, no spines, comb of 7 or 8 stiff bristles on IV tarsus, tarsi little shorter than metatarsi; epigynum a rather large reddish-brown oval area, slightly wider than long, convex, with many short hairs, much darker about lateral margins, at anterior portion beneath the skin a pair of dark ovals separated by less than a radius, openings probably a pair of ovals separated by their short diameter just above the fold.

Holotype ♀ Cuba; Soledad, 1-11 August 1934, (Darlington).

Paratypes 3 ♀ Cuba; Soledad, August 1934, (Darlington).

O.P. Cambridge proposed the genus *Stemmops* for a male from Tabasco. Later F.O.P. Cambridge described the female and a second male. In 1897, Simon described a second species from St. Vincent. *Stemmops darlingtoni* differs from the others in color, and slight differences in the eyes and the epigynum.

Genus *THERIDION* Walckenaer 1805*THERIDION ATKINSI* spec. nov.

Figures 72, 73, 77

Male. Length, 1.5 mm., ceph. 0.7 mm., abd. 1.0 mm.

Cephalothorax pale, clear yellow with a black marginal line and a median black line to thoracic groove, a few long bristles behind eye area; eyes, anterior row slightly recurved, a.m.e. surrounded by black, slightly largest, a diameter apart, a.l.e. surrounded by red, less than one-quarter diameter from a.m.e., posterior row procurved, eyes subequal and equidistant, and surrounded by red, p.m.e. separated by a diameter; quadrangle of median eyes wider in front and as high as wide; clypeus convex, higher than quadrangle, with a pair of low ridges between anterior row of eyes and the margin; mandibles vertical, almost twice as long as clypeus, outer margins parallel, fang weak; labium slightly wider than long, narrowed at tip; maxillae more than twice as long as labium, inclined; sternum pale yellow, slightly convex, triangular, as long as wide, widest between I coxae, IV coxae separated by less than a diameter; abdomen a dull gray with paired irregular pale spots each side of median area, venter gray, epigastric fold posterior to middle; legs same color as cephalothorax, without markings but with many fine hairs and bristles in rows, anterior pairs very long; palpus, tibia little longer than patella, cymbium barrel-shaped, broadly truncate at tip, embolus starting from enlargement near distal end below two black apophyses.

Female. Length, 1.5 mm.

Coloring same as in male but paler, the median dark line and the marginal line very distinct; epigynum very small, a large dark mass near pedicel, openings in a depressed area.

Holotype ♂ Cuba; Soledad, garden, 11 August, 1931, (Worley).

Allotype ♀ Cuba; Soledad, Sabruco, 16 August, 1931, (Banks).

Theridion atkinsi is related to *Theridion defunctum* Petr. from San Lorenzo River, Panama. It differs in the following points: a pair of low ridges on clypeus instead of short horns, the abdominal markings, which in *Theridion defunctum* are described as "a dark basal spot followed by two rows of three dark spots each, and smaller spots in between." The palpi are similar.

THERIDION CABRIOLATUM Franganillo

Theridion cabriolatum Franganillo, 1930, p. 12, fig. 4; Bryant, 1936, p. 325, pl. 23, figs. 2, 3; Franganillo, 1936, p. 51, fig. 20.

Female. Length, 4.0 mm., ceph. 1.6 mm., abd. 2.5 mm.

Cephalothorax with a broad black stripe from anterior eye row to posterior margin, a dark marginal stripe, narrow above first coxae, and wide at posterior margin with upper edge very irregular, leaving two irregular pale patches each side, thoracic groove a deep triangular depression; eyes, anterior row recurved, a.m.e. smallest, separated by a diameter and a half and from a.l.e. by a diameter, posterior row straight, eyes subequal, p.m.e. separated by a scant diameter and from p.l.e. by a diameter and a half, lateral eyes touching and surrounded by red; quadrangle of median eyes wider in front and as high as wide; clypeus with a distinct groove below anterior eye row, lower half convex and projecting, as high as quadrangle; mandibles brown, long and attenuate, fang weak; labium almost twice as wide as long, slightly narrower at tip than at base; maxillae three times as long as labium, slightly inclined, outer margins dark; sternum dark, triangular, slightly longer than wide, widest between first coxae, fourth coxae separated by a diameter; abdomen with a small bilobed basal spot, followed by three pairs of widely separated dark spots, connected by diagonal gray lines to a median gray line, a pair of dark spots near apex, sides with diagonal dark spots, venter a broad dark median stripe from pedicel to dark ring around spinnerets, about middle a white rectangular spot; legs much broken, 1-4-2-3, very unequal in length, broad dark rings at tip of femora, tibiae and metatarsi, tarsal comb of 7 long curved bristles; epigynum, a simple circular opening, heavily chitinized on lower margin anterior to fold.

♀ Cuba; Soledad, 9 October, 1926, (Darlington).

♂ 2 ♀ Cuba; Sierra de Cobre, Loma del Gato

♂ Cuba; Trinidad Mountains, Buenos Aires, 2,500-3,500 feet, 9 May, 1936, (Darlington).

♂ ♀ Cuba; South side of Pico Turquino, June 1936, (Darlington).

♀ Cuba; Mountains North of Imias, 3,000-4,000 feet, July 1936, (Darlington).

Franganillo had twelve females from the Sierra Maestra, and in his last paper he described the male. Both males and females are brilliantly marked with black and yellow as is characteristic of the section *Phyllonethis*. The markings are very close to the figures of *Theridion electum* (O.P. Cambridge).

THERIDION FLORIDENSE Banks

Figure 85

Theridion floridense Banks, 1904, p. 125.

? *Theridion lyra*, Keyserling, 1884, p. 50, pl. 2, fig. 28, *nec lyra* Hentz.

This is a very small species and is evidently very variable in color markings. Keyserling had only a female from Centerville, Florida, (Marx Coll.), he figures the entire spider and the epigynum. The latter is very distinct. Mr. Banks found both males and females at Runnymede and Lake Worth. Our Cuban specimen is smaller than those from Florida but the epigynum is the same.

♀ Cuba; Soledad, Vilches Hill, 18 August, 1931, (Worley).

THERIDION FORDUM Keyserling

Theridion fordum Keyserling, 1884, p. 23, pl. 1, fig. 9.

Tidarren fordum, Chamberlin and Ivie, 1934, no. 4, p. 5, pls. 1, 2.

Until 1934, only the female of this species was known. Then males and females were found together in California, Florida, and Texas. Females were abundant at Barro Colorado, Panama, and the Biol. Centr. Amer., reports it from various parts of Mexico, Central America, and Brazil. Dr. Petrunkevitch found one female in Puerto Rico. The male is very small and only one palpus develops.

♀ Cuba; Soledad, Vilches Cave, August 1931, (Worley).

THERIDION GLOBOSUM Hentz

Theridion globosum Hentz, 1850, p. 278, pl. 9, fig. 23; Emerton, 1882, p. 14, pl. 2, fig. 3.

This small *Theridion* is found from New Hampshire to Florida. It has not been found in Central America or any of the islands of the West Indies.

♀ Cuba; Soledad, Vilches Hill, 18 August, 1931, (Worley).

THERIDION RUFIPES Lucas

Theridion rufipes Lucas, Explor. Algerie, 1847, p. 263, pl. 16, fig. 5.

Steatoda rufipes, F.O.P. Cambridge, Biol. Centr. Amer., 1902, p. 384, pl. 36, figs. 15, 16.

Several males and females of this cosmotropical spider were found at Vilches Cave, Soledad, 14 August, 1931 by Banks and Worley. It was not found by Petrunkevitch in Puerto Rico.

Genus *THERIDULA* Emerton 1882

THERIDULA OPULENTA (Walckenaer)

Theridion opulentum Walckenaer, 1837, p. 322.

Theridula sphaerula Emerton, 1882, p. 25, pl. 5, fig. 3.

Theridula opulenta, Petrunkevitch, 1930, p. 189, figs. 33-36.

This is a common cosmopolitan species found from Canada to Peru. It varies greatly in size, coloring, the development of the abdominal spines, and has been described and figured under many names. It has been found at Soledad and the Trinidad Mountains.

Sub-family NESTICINAE

Genus *NESTICUS* Thorell 1870

NESTICUS ANTILLANUS spec. nov.

Figure 90

Male. Length, 2.6 mm., ceph. 1.1 mm. long, 1.0 mm. wide, abd. 1.6 mm.

Cephalothorax smooth and shining, pale yellow with a median dark stripe from p.l.e., narrowed at thoracic groove and continued at about half the greatest width to posterior margin, clypeus dusky, anterior margin narrowed to half the greatest width, rather low and flat, thoracic groove long and very deep; eyes almost cover width of head, anterior row recurved, equidistant, a.m.e. smallest, dark, separated by less than short diameter, posterior row procurved, eyes surrounded by red, p.m.e. oval, slightly larger than p.l.e., separated by a little less than short diameter, and from p.l.e. by less, lateral eyes on a low tubercle, touching, subequal; quadrangle of median eyes narrower in front and higher than wide; clypeus, slightly convex with a faint depression below anterior row, as high as quadrangle; mandibles small and cone-shaped, without boss, fang groove slightly oblique, three teeth on superior margin of groove; labium not quite as long as wide, apparently fused to sternum; maxillae twice as long as labium,

slightly inclined, palpi incerted at basal third; sternum triangular, convex, IV coxae separated by a little less than a diameter; abdomen oval, little more than half as wide as long, base very narrow, a median gray stripe from base to spinnerets, with a black stripe each side that is broken by pale spots, sides with an oblique narrow black stripe, venter pale, epigastric fold black with a large black spot in front of spinnerets, sides and venter with long scattered hairs; legs, I pair and III left missing, very long and slender, many are broken so that it is impossible to count spines on tibia and metatarsus, comb of long bristles on IV tarsus; palpus as long as cephalothorax, tibia a little longer than patella with a rounded lobe on dorsal side, paracymbium long and divided, the lower portion large and spoon-shaped with a dark tooth on upper margin, upper portion much longer and very slender with distal half dark and ribbon-like, embolus arises on margin, follows the contour of cavity, and at top makes an abrupt right angle turn ending in a small black tip between two points, between tip and origin of embolus, is a long spatulate process half the length of the cymbium which extends outward at right angles to plane of the palpus, this has quite a large base, and ends in a black curved hook very similar to process in *Nesticus cellulanus*, seen from the opposite side is a dark hook near the base.

Holotype ♂ Cuba; South side of Pico Turquino, June 1936, (Darlington).

This species is much smaller than the genotype but the palpus is very similar. It differs in the divided paracymbium, the slightly inclined maxillae and the deep thoracic groove. In *Nesticus cellulanus*, the genotype, the inner margins of the maxillae are parallel and the thoracic groove is a transverse depression.

NESTICUS PALLIDUS Emerton

Nesticus pallidus Emerton, 1875, p. 279, pl. 1, figs. 22-27.

Nesticus suggerens Chamberlin, 1924, p. 15, pl. 4, figs. 29-31.

Theonoe striatipes Petrunkevitch, 1930, p. 167, figs. 29-31.

Centromerus ovigerus ibid., p. 215, figs. 63, 64.

Female. Length, 2.6 mm., ceph. 1.0 mm., abd. 1.7 mm. long, 1.7 mm. wide.

Cephalothorax nearly as wide as long, yellow, clouded about margin, three converging rows of bristles from eyes, meeting at thoracic groove, groove longitudinal about middle of carapace; eyes

anterior row straight, equidistant, a.m.e. smallest of the eight and about half the diameter of a.l.e., posterior row procurved so that lateral ones touch, subequal, p.m.e. separated by more than a diameter and by about a diameter from p.l.e.; quadrangle of median eyes narrower in front, higher than wide; clypeus higher than quadrangle; mandibles vertical, attenuate, longer than clypeus with at least two teeth on superior margin of fang groove; labium twice as broad as long, fused to sternum, tip truncate; maxillae more than twice as long as labium, not inclined, upper margin with a distinct carina; mouth parts and coxae pale; sternum dark gray, triangular, widest between first coxae, truncate at tip, fourth coxae separated by more than a diameter; abdomen as long as wide, sometimes bilobed at base, dark gray with an indistinct pale median line extending almost to spinnerets, with scattered long hairs or bristles, venter dark gray; legs rather short, yellow with many long bristles in rows, no spines; epigynum near pedicel, seen laterally as a distinct swelling.

♀ Cuba; Soledad, grass near laboratory, 1 August, 1931, (Worley).

♀ Cuba; Soledad, April, 1936, (Darlington).

♀ Cuba; Maisi, 15, 16 July, 1936, (Darlington).

♀ Cuba; San Antonio de los Baños, (Aguayo).

This species was described from a male and female found in a cave in Virginia. *Nesticus suggerens* was described from Louisiana and *Thconoe striatipes* and *Centromerus origerus* from Puerto Rico. The types of the first two species are in the Collection of the Museum of Comparative Zoology. The species has been found in New York and Texas, and in a small collection of spiders made by Professor Kincaid during July, 1905 at Bermuda.

The genus *Nesticus* was proposed by Thorell in 1870 for *Aranca cellulana* Clerck and placed between *Theridion* and *Steatoda*. Because it has a comb on the fourth tarsus it has been placed by some students in the *Theridiidae*. It also has a very large paracymbium and so, by others, it is regarded as an aberrant genus in the Argiopidae. Dahl makes a new family for it. That it is aberrant and not stable is shown by the thoracic groove which is a transverse depression in the genotype, a very long and deep groove in *N. antillanus*, and a short groove in *N. pallidus*. It is not surprising therefore, that the species have so often been misplaced. While *Centromerus origerus* is described as lacking a comb on the fourth tarsus, the figure of the palpus agrees perfectly with the palpus of *pallidus*. It probably has a very wide distribution, but as it is small and pale it is easily overlooked.

Family LINYPHIIDAE

Sub-family LINYPHIINAE

Genus LINYPHIELLA Banks 1905

LINYPHIELLA COCCINEA (Hentz)

Linyphia coccinea Hentz, 1850, p. 30, pl. 4, fig. 8.

Frontina coccinea, Keyserling, 1886, p. 100, pl. 14, fig. 188.

Linyphiella coccinea, Banks, 1905, p. 311.

Linyphia humilis Franganillo, 1926, p. 50.

Linyphia vicina Franganillo, *ibid.*, p. 51, (10); *ibid.*, 1936, p. 59.

Frontinella coccinea, Blauvelt, Festschrift Dr. Strand, 1937, p. 149, figs. 96, 100.

This is a common species in the southern United States. Banks reports it from Haiti but Petrunkevitch did not find it in Puerto Rico. Through the kindness of Dr. C. S. Crosby, Franganillo's species have been compared with typical specimens from Florida.

♂ ♀ Cuba; Havana, Banks Coll.

♂ ♀ Cuba; Soledad, August 1931, (Banks and Worley).

♂ ♀ Cuba; Siboney, 1915, (Ferrer).

Sub-family LOPHOCARENINAE

Genus CERATICELUS Simon 1884

CERATICELUS NIGRIPES spec. nov.

Figures 91, 92, 96, 100

Male. Length, 1.5 mm., ceph. 0.7 mm., abd. 0.8 mm.

Cephalothorax bright yellow, eye area darkened and elevated in a bluntly-rounded tubercle, eyes surrounded by black with a few bristles about a.m.e. and two diverging rows of stout bristles best seen in profile from p.m.e. to base of tubercle; anterior row of eyes re-curved, a.m.e. smallest, separated by a scant diameter and from a.l.e. by more than two diameters, posterior row slightly procurved, p.m.e. separated by two diameters and from p.l.e. by a diameter and a half, lateral eyes subequal and touching; quadrangle of median eyes narrower in front and as wide as high behind; clypeus slightly convex below a.m.e., then vertical, about twice as high as quadrangle; sternum pale yellow, widest between second coxae, squarely truncate at tip, fourth coxae separated by more than a diameter; abdomen about same color as cephalothorax with dorsal sclerite covering the entire abdomen,

fine hairs very indistinct, from corneous pits, venter, epigastric sclerite faint and inframmillary sclerite very light colored; legs, femora pale yellow, darker at tip, patellae and tibiae almost black, metatarsi and tarsi dark, all joints with rows of fine hairs; palpus, femur pale and slightly curved, patella pale, almost as long as femur, much swollen, so that at middle it is broader than femur, wider at tip than at base, and almost as long as cymbium, tibia short, paracymbium very long, slender and tapering, ending in a sharp point, base broad, dorsal sides of cymbium strongly angulate and ending in a sharp hook, the ridge armed with a row of stiff curved hairs, separate parts of palpal organ difficult to see because of lack of color, but a large black spine (embolus) is visible near the tip.

Female. Length, 1.7 mm.

Female much darker than male, head low and eyes surrounded by black; patellae and tibiae black; dorsal sclerite smaller than on male, both epigastric and inframmamillary sclerites distinct, the latter broad on venter and sides; epigynum two oblique oval openings as figured.

Holotype ♂ Cuba; Soledad, 16 August, 1931, (Banks).

Allotype ♀ Cuba; Soledad, 16 August, 1931, (Banks).

Paratypes ♂ 3 ♀ Cuba; Pico Turquino, 6,000 feet, 16-21 June 1936, (Darlington).

This species differs from others of the genus by the bluntly rounded head of the male, the very long paracymbium, and the enlarged patella of the palpus. In both male and female the patellae and tibiae are conspicuously dark. The male and female from Pico Turquino are very dark but the palpus and epigynum agree with the specimens from Soledad. The male has the paracymbium a little longer, and the angle on the dorsal side of the cymbium, seen in profile, is produced in a tubercle.

CERATICELUS TUMIDUS spec. nov.

Figures 93, 94, 97

Male. Length, 1.5 mm.

Cephalothorax orange-yellow, head elevated, darker about the eyes, much swollen, projects forward, bluntly rounded in front, not divided in lobes; eyes, in rows of equal length so that lateral eyes are touching, anterior row strongly recurved, a.m.e. smallest, separated by a little more than a diameter, posterior row slightly recurved, p.m.e. largest,

separated by more than two diameters and from p.l.e. by a diameter and a half; clypeus retreating, more than twice the eye area, convex below the eyes and then concave; sternum and mouth parts orange; abdomen yellow, paler than cephalothorax; dorsal sclerite almost covers the dorsum, not much darker than dorsum, venter pale, epigastric sclerite distinctly orange-yellow, thicker and darker along furrow, inframammillary sclerite distinct and paler than epigastric; palpus, femur nearly straight, patella short, strongly curved dorsally, tibia short with a small tooth on inner side, paracymbium long, broad with sides parallel and squarely truncate tip, bezel large, slightly constricted about middle and greatly swollen at base, tail-piece of embolic division long and curving.

Holotype ♂ Cuba; Havana, (Cervera).

This species is related to *Ceraticelus similis* (Banks) but it is easily separated by the much broader paracymbium and the heavy bezel. The head is more swollen and projects farther forward.

Sub-family GONATIINAE

Genus WALCKENAERA Blackwall 1833

WALCKENAERA VIGILAX (Blackwall)

Nerienne vigilax Blackwall, Ann. Mag. Nat. Hist., 1853, p. 24.

Spiropalpus spiralis Emerton, 1882, p. 39, pl. 10, fig. 6.

Walckenaera vigilax, Crosby and Bishop, 1931, p. 378, figs. 71-75.

This small spider has a wide distribution in Europe and America. It has been found as far west as Laggan, Canada, and south to Florida. Crosby found it in the material collected by airplane at an altitude of 2,000 feet at Tallulah, Louisiana.

♂ Cuba; Havana, Cojimar, 1 May, 1931, (Aguayo).

Sub-family ERIGONINAE

Genus CERATINOPSIS Emerton 1882

CERATINOPSIS ANGLICANA (Hentz)

Theridion anglicanum Hentz, 1850, p. 275, pl. 9, fig. 6.

Ceratinopsis anglicana, Bishop and Crosby, 1930, p. 15, figs. 1-4.

This small species is found in the southern part of the United States. Bishop and Crosby give a detailed description and figures. They had a female from Cerro Cabras, Cuba.

♂ ♀ Cuba; Havana, (Cervera).

Genus ERIGONE Audouin 1825

ERIGONE AUTUMNALIS Emerton

Erigone autumnalis Emerton, 1882, p. 58, pl. 17, fig. 8; Crosby and Bishop, 1928, p. 19, figs. 18-20.

This little species has a wide distribution. The types are from Boston, Massachusetts, and New Haven, Connecticut. It has been taken by airplane at Tallulah, Louisiana at an altitude of 2,000 feet, and it has been found in Bermuda, as far south as Florida, and west to Texas.

♂ ♀ Cuba; Soledad, 3 July, 1932, (Bates and Fairchild).

Genus GRAMMONOTA Emerton 1882.

GRAMMONOTA EMERTONI spec. nov.

Figure 88

Female. Length, 2.5 mm., ceph. 1.0 mm., abd. 1.5 mm.

Cephalothorax pale yellow, thoracic portion lightly shaded with gray, two-thirds as wide as long, anterior margin slightly narrowed, no thoracic groove; eyes not covering the width of the head, each eye surrounded by black, anterior row recurved, a.m.e. smallest of the eight, separated by a line and from a.l.e. by a diameter; posterior row strongly procurved, p.m.e. slightly larger than p.l.e., separated by less than a diameter and from p.l.e. by a diameter, lateral eyes touching and subequal; quadrangle of median eyes narrower in front and twice as high as wide behind; clypeus not as high as quadrangle and slightly convex; pedipalp without a claw; mandibles slightly swollen at base, fang groove a little oblique, superior margin with four teeth and inferior margin with four smaller teeth, fang long and evenly curved; labium one-half as long as wide, one-third width of sternum, rebordered; maxillae three times as long as labium and slightly inclined; sternum pale yellow, dark gray about margins, wider than long, (4:3), lateral margins emarginate between coxae, carried as a lobe between IV coxae and almost reaching pedicel, only slightly convex,

IV coxae separated by more than a diameter; abdomen broadly oval, (9:11), sparsely clothed with short, fine hairs, with gray markings characteristic of *Grammonota*, a narrow median gray line from base to middle with pale areas each side, posterior half with slightly bent chevrons, sides gray, venter paler, spiracle openings are two widely separated openings anterior to spinnerets; legs pale yellow with rows of fine hairs beneath I and II pairs, some of the hairs are longer but hardly could be called spines; epigynum very near the pedicel, darkened area as wide as high, slightly rounded from plane of abdomen, above the posterior margin a crescent-shaped line heavily chitinized, anterior to this on each side are oblique oval openings with margins heavily chitinized.

Holotype ♀ Cuba; Soledad, 1-11, August 1934, (Darlington).

This species is undoubtedly related to *Grammonota insanus* (Banks), *Acartauchenius insanus*, Proc. Cal. Acad., 1898, 1, p. 242, pl. 14, fig. 12, and is redescribed and figured by Bishop and Crosby, Journ. N. Y. Ent. Soc., 1932, 40, p. 398, figs. 14-17. It is known only from the type material collected at San Miguel Heracosta, Sonora, Mexico. The female of *emertoni* has a narrower sternum, and in the epigynum, the median lobe is narrower and the openings are above the darkened areas.

Family ULOBORIDAE

Sub-family ULOBORINAE

Genus ULOBORUS Latreille 1806

ULOBORUS AMERICANA Walckenaer

Uloborus americana Walckenaer, 1837, 2, p. 229.

Uloborus plumipes Emerton, Trans. Conn. Acad., 1888, 7, p. 454, pl. 11, fig. 1.

Found from New England south to Florida and Central America. Petrunkevitch did not find it in Puerto Rico. The female is easily distinguished from the other species found in Cuba by the first tibia and metatarsus which have a fringe of hairs; also the epigynum is deeply notched on the posterior margin.

♂ ♀ Cuba; Soledad.

ULOBORUS GENICULATUS (Olivier)

Aranea geniculata Olivier, Encycl. Method., 1791, p. 214.

Uloborus geniculatus, Petrunkevitch, 1930, p. 228, figs. 75-76.

This is a cosmotropical species. It has been found in Bermuda, Central America, and most of the islands of the West Indies. Petrunkevitch figures the epigynum and the palpus.

♂ ♀ Cuba; Santiago de las Vegas, Banks Coll.

ULOBORUS VARIEGATUS O. P. Cambridge

Figure 95

Uloborus variegatus O. P. Cambridge, 1898, p. 266, pl. 38, fig. 11; F. O. P. Cambridge, *ibid.*, 1902, p. 362, pl. 34, fig. 8; Petrunkevitch, 1930, p. 229, figs. 77, 78.

Uloborus communis Franganillo, 1926, p. 46.

Male. Length, 3.0 mm., ceph. 1.4 mm., abd. 1.6 mm.

Cephalothorax pale brown with scattered white hairs most numerous about the eyes, four-fifths as wide as long, sides evenly rounded, anterior margin narrow, thoracic groove a Y-shaped depression; eyes, anterior row seen from the front, straight, a.m.e. largest of the eight and carried forward on a lobe, separated by a diameter and a half, other eyes subequal, posterior row slightly recurved, not quite as long as anterior row, p.m.e. little nearer p.l.e. than to each other; quadrangle of median eyes narrower in front and as wide as high; clypeus equals diameter of a.m.e.; mandibles small, vertical, and margins covered by tips of maxillae so that fang groove can not be seen; labium small, longer than wide, tip pointed; maxillae with tips much broadened, truncate with black margins; sternum pale brown, darker about margin, triangular, ending in a blunt point between IV coxae; abdomen twice as long as wide, pale brown, posterior half thickly covered with cream-colored paired spots, basal half high, rounded, and the two pairs of humps found on female can be traced only by paired pale spots, tip much darker and broadly rounded, venter pale, mottled with dark brown, and a pair of diverging pale stripes from the lung slits which disappear on sides near the spinnerets; legs brown, I pair longest, I femur slightly bent and enlarged, I tibia with many short spines on dorsal side, irregularly placed and most numerous near the tip, II, III and IV femora with row of long curved cilia as in the female; palpus short, patella and tibia not as long as wide, each with a very long, stiff bristle on dorsal side; palpus almost globose as figured.

Allotype ♂ Cuba; Soledad, 9 January, 1927, (Brues).

♂ ♀ Cuba; Soledad, January, 1927, (Brues).

Mr. Banks reported *Uloborus republicanus* Simon from Cayamas,

collected by Mr. Schwarz in March, 1905. The latter published an interesting account of the huge web in the Proc. Ent. Soc. Wash., 1904, 6, p. 147-148. It is probably *Uloborus variegatus* Cambridge, as the latter species has been found at Soledad. *Uloborus republicanus* was first found by M. Simon in Venezuela, and an account of the web was published in a short paper on social spiders in the Ann. Soc. Entomol. France, 1891, 60, p. 5-14, pls. 1-4. Later Petrunkevitch found it in Trinidad, and it has since been reported from Barro Colorado, Panama. *Uloborus variegatus* is smaller and darker. Petrunkevitch gives a detailed description of the female in his Porto Rican Spiders. The male is even smaller than the female, the legs are brown, without the wide dark bands as in the female, and the a.m.e. are carried forward on a lobe as in some of the male Argiopidae. It differs from the male of *U. republicanus* by the small size and the a.m.e. Both have the same type of palpus with the circular embolus half hidden by a flattened piece, and ending at the tip of the cymbium as a short black point near the conductor which is also much reduced in size. Franiganillo, 1936, states there is great variation in the amount of color, but all specimens in the Museum of Comparative Zoology Collection are very dark.

Genus MIAGRAMMOPES Simon 1869

MIAGRAMMOPES CUBANUS Banks

Figure 86

Miagrammopes cubanus Banks, 109, p. 159.

Female. Length, 6.0 mm.

Cephalothorax brown, covered with fine white hairs, almost twice as long as wide, with a lateral protuberance about one-third from anterior margin which carries the lateral eyes, then slightly narrowing, and sides almost parallel to posterior margin; eyes of anterior row wanting, posterior row straight, subequal, median eyes separated by twice the distance between median and lateral; mandibles pale, mouth parts and sternum brown; abdomen yellowish with an indistinct brown basal spear-mark on each side of which is a dark spot covered with fine white hairs, venter mottled, very dark about spinnerets; legs, I pair longest and heaviest, with a heavy brush of dark hairs on prolateral and retrolateral sides of metatarsus, and a ventral row of white hairs on tibia, femur with a basal retrolateral dark spot, prolateral basal and distal dark spots, II and III pairs weak and short, femora with

basal prolateral row of curved cilia, IV metatarsus concave, calamistrum nearly the entire length, and the usual row of short, stiff bristles on ventral side of tarsus and apical third of metatarsus; epigynum as figured.

Holotype ♀ Cuba; Cayamas, (Baker and Schwarz), Banks Coll.

♀ Cuba; Soledad, August, 1936, (Darlington).

The type is probably one or two moults from maturity so that it is impossible to trace all parts of the epigynum. I have not seen *Miagrammopes ciliatus* Petrunkevitch from St. Thomas, Virgin Islands, but from the description and the figures, it differs from the Cuban species in the shape of the epigynum. Franganillo reports *Miagrammopes thwaitesii* Cambridge from the Sierra de Rangel. It came originally from Ceylon.

MIAGRAMMOPES LATENS Bryant

Figure 98

Miagrammopes latens Bryant, 1936, p. 326, pl. 23, fig. 4.

Female. Length, 7.0 mm., ceph. 2.0 mm., abd. 5.0 mm.

Cephalothorax brown, mottled with black, twice as long as wide, dark rings about eyes and lateral eye tubercle black, a circular depression in place of thoracic groove; eyes of anterior row impossible to see even with a high magnification and strong light, eyes of posterior row slightly recurved, and subequal; p.m.e. nearer p.l.e. than to each other; mandibles, labium, maxillae, palpi and sternum pale; sternum poorly defined but lateral margins carried between II and III coxae; abdomen dull yellow with a dark basal spear-mark, four pairs of dark dots on margin, and several unpaired black dots on basal half, an abrupt enlargement anterior to middle, and a large dorsal tubercle over the spinnerets, venter dull yellow with a pair of large dark spots about midway between the fold and the spinnerets; legs very unequal in length; I pair longest, 8.0 mm. long, brown, except for tarsus, no brush of hairs on tibia or metatarsus, no spines, II and III pairs very short, pale yellow, femora with prolateral basal row of curved cilia, IV pair yellow, calamistrum almost entire length of metatarsus, ventral row of spindle-shaped spines on metatarsus and tarsus; epigynum as figured.

Holotype ♂ Cuba; Sierra de Cobre, Loma del Gato, 2,600-3,500 feet, (Bruner).

Allotype ♀ Cuba; Trinidad Mountains, Mina Carlota, 19-25 March, 1925, (Salt and Myers).

Paratype ♀ Cuba; Soledad, August, 1931, (Worley).

Paratype ♀ Cuba; Soledad, April, 1936, (Darlington).

Paratype ♂ Cuba; Pico Turquino, 25 June, 1936, (Darlington).

Paratypes ♂ 3 ♀ Cuba; South side Pico Turquino, 3,000–5,000 feet, June, 1936, (Darlington).

This species was described from a male that had most of the spines on the first tibia broken. Most of the specimens seen are immature and there is great variation in the markings; some are dark brown and show no spots, others are pale and have the conspicuous dark spot on the first femur as in *M. cubanus*; in some, the fringe of cilia on the first and second femora have been brushed off and it is difficult to see the scars.

It is possible that this species may prove to be a synonym of *M. cubanus* Banks, as the type of the latter is probably one or two moults from maturity and the markings, rows of cilia and brush on first tibia and metatarsus are characters that are not always easy to find in immature specimens. Petrunkevitch described *M. ciliatus* from St. Thomas, Virgin Islands 1926, and later reported it from Puerto Rico. He states that color pattern is of little value as a specific character, and that because the eyes of the anterior row are so small as to be overlooked, it is a character that can not be used.

Family DEINOPIDAE

Genus DEINOPIS MacLeay 1839.

DEINOPIS LAMIA MacLeay

Figures 99, 101

Deinopis lamia MacLeay, 1839, p. 9, pl. 2, fig. 1; Petrunkevitch, 1930, p. 234, figs. 83–86.

Female. Length, 22.5 mm., ceph. 4.6 mm. long, 3.0 mm. wide, abd. 18.0 mm. long, 3.5 mm. wide.

Cephalothorax brown, mottled with dark spicules on posterior portion, bright red behind p.m.e., flat, no thoracic groove, head narrowed to width of large eyes, lateral margins parallel and posterior margin wider than anterior; mandibles brown, vertical, no boss, fang groove oblique; superior margin with five teeth, inferior margin with five teeth, four nearest base of fang small and unequal, followed by one much larger, fang strong and evenly curved; labium longer than wide, with tip rounded and clear; maxillae at least twice as long as

labium, palpi inserted about middle, distal half much narrowed, inner margin clear, palpus with a conspicuous claw at tip; sternum pale brown, mottled with darker brown, triangular, ending in a sharp point in front of IV coxae, IV coxae contiguous; abdomen brown with a narrow median dark line from base to spinnerets, sides vaguely striped with pale and dark lines of equal width, with scattered short dark spicules, about middle of abdomen, a pair of dorsal swellings ending in a spine directed towards the tip, best seen in a lateral view, venter pale with an indefinite gray stripe from pedicel to spinnerets, cribellum entire, spinnerets at end of abdomen, anterior pair large, cone-shaped, almost touching, median pair much smaller and widely separated, posterior pair contiguous, cone-shaped; legs, 1-2-4-3, very long, I pair,

femur	patella + tibia	metatarsus + tarsus	total
12.0 mm.	11.5 mm.	14.0 mm.	37.5 mm.

I femur pale brown, mottled with a darker brown, a basal, prolateral fringe of long hairs, spines scattered and very short; calamistrum of fine colorless hairs on basal quarter of IV metatarsus; epigynum dark brown, area slightly convex, a simple transverse oval opening above the fold.

Male. Length, 18.0 mm., ceph. 4.0 mm. long, 2.0 mm. wide, abd. 14.0 mm. long, 1.5 mm. wide.

Cephalothorax brown as in female, with a median pale stripe which is forked anteriorly, darker portions with scattered dark spicules; head narrowed to width of large eyes, lateral margins parallel, posterior margin wider than anterior, no thoracic groove; mandibles brown, vertical, fang groove oblique, no teeth on superior margin but a scopular of long hairs, inferior margin with one small tooth; labium same as in female; maxillae twice as long as labium, touch mandibles, palpi inserted about middle, distal half much narrowed and divergent; sternum triangular, brown with a median pale stripe; abdomen with a narrow dark stripe from base to spinnerets, sides with narrow dark and pale stripes, scattered dark spicules, the pair of dorsal swellings found in female missing but represented by a cluster of dark spicules, venter with distinct median dark stripe from pedicel to spinnerets; legs very long and slender, 1-2-4-3, I pair,

femur	patella + tibia	metatarsus + tarsus	total
16.0 mm.	18.0 mm.	25.0 mm.	59.0 mm.

I femur with no basal prolateral fringe of long hairs; palpus about as long as cephalothorax, basal half of femur pale, remainder of palpus brown with scattered white hairs, patella as long as wide, tibia a little

longer, cymbium as wide as long, palpal organ convex, embolus with three concentric circles in center around a square white membrane.

Allotype ♂ Cuba; Coast below Pico Turquino, 30 June, 1936, (Darlington).

♀ Cuba; Coast below Pico Turquino, 30 June, 1936, (Darlington).

♀ Cuba; South side Pico Turquino, 3,000–5,000 feet, June, 1936, (Darlington).

immat. ♀ Cuba; Soledad.

MacLeay described the species from a specimen probably half grown, as it was only $4\frac{1}{2}$ lines long, (14.0 mm.). In 1930, Petrunkevitch redescribed the female from Desecheo Island in his paper on Porto Rico Spiders. It was 14.0 mm. long but he does not mention the epigynum, and in the description, he fails to mention the pair of dorsal projections of the abdomen. Franganillo has described two more species, both from females, but his descriptions give little more than generic characters. Probably the eyes are the same in all species. Evidently the teeth on the fang groove are a very uncertain character as they are unlike in the male and female. A number of immature specimens have been seen and these lack the dorsal projections of the abdomen.

Family ARGIOPIDAE

Sub-family ARGIOPINAE

Genus ARGIOPE Audouin 1825

ARGIOPE ARGENTATA (Fabricius)

Aranea argentata Fabricius, 1775, p. 433.

Gea panamensis Chamberlin, 1916, p. 243, pl. 19, fig. 8.

Argiope argentata, Petrunkevitch, 1930, p. 241, figs. 90–92.

This species is found in the southern part of the United States, Central America, West Indies, and south to Patagonia. Both males and females from all parts of Cuba are common in collections.

ARGIOPE AURANTIA Lucas

Argiope aurantia Lucas, 1833, 2, p. 87, pl. 1, fig. 1.

Argiope riparia Emerton, 1884, p. 329, pl. 34, fig. 19, pl. 38, figs. 13, 14, 19.

Miranda cophinaria F.O.P. Cambridge, 1903, p. 452, pl. 43, figs. 4, 5.

This is a common species in the United States, Mexico and Guatemala. Petrunkevitch did not find it in Puerto Rico, and it has not been reported by Franganillo.

♀ Cuba; Havana.

ARGIOPE TRIFASCIATA (Forskål)

Aranea trifasciata Forskål, Descript. Anim., 1775, p. 86, Petrunkevitch, 1930, p. 239, figs. 87-89.

A common species from Canada to Chili. It is common in collections from all parts of Cuba.

Genus GEA C. Koch 1843

GEA HEPTAGON (Hentz)

Epeira heptagon Hentz, 1850, p. 20, pl. 3, figs. 5, 6; Petrunkevitch, 1930, p. 243, figs. 93-96.

This species is found in the southern United States and south to Brazil.

♂ ♀ Cuba; Soledad.

♀ Cuba; Havana, Banks Coll.

Sub-family ARANEINAE

Genus ARANEA LINNAEUS 1758

ARANEA FAXONI spec. nov.

Figures 102, 103

Female. Length, 2.5 mm., abd. 1.6 mm. long, 1.6 mm. wide, I leg 3.0 mm. long.

Cephalothorax pale yellow without markings; eyes, anterior row recurved, equidistant, a.m.e. slightly largest of the eight, separated by about a diameter and a half, a.l.e. about half the diameter of a.m.e., posterior row straight, and equidistant, p.m.e. separated by a little more than a diameter, lateral eyes touching, p.l.e. slightly larger than a.l.e.; quadrangle of median eyes wider in front; clypeus equals about diameter of a.m.e.; mandibles pale yellow, superior margin of fang groove with three subequal teeth, inferior margin with two teeth; sternum colorless, triangular; abdomen yellow-white without mark-

ings, about as wide as long, with slight shoulder humps that project upwards rather than laterally, the four muscle spots show faintly, venter almost covered with a rectangular white spot, followed by a pair of widely separated white spots anterior to the spinnerets; legs rather short, pale without markings, spines few and colorless; epigynum wider than long, median septum very broad posteriorly and openings widely separated.

Holotype ♀ Cuba; Siboney, (Ferrer).

But one other minute *Aranca* has been described from Cuba, *Epeira gundlachi* Banks. This is very small but the description does not mention any shoulder humps, and the abdomen is one and a half times as long as broad; also the figure of the epigynum is very different. *Aranca faxoni* belongs to the group of small, angulate spiders of which *Aranca miniata* (Walck.) is the most common in the United States. It is named in honor of the late Dr. Walter Faxon, a former curator at the Museum of Comparative Zoology who showed great interest in my early studies of spiders.

ARANEA PEGNIA (Walckenaer)

Epeira pegnica Walckenaer, 1837, 2, p. 80.

Epeira globosa Keyserling, 1865, p. 820, pl. 18, figs. 19, 20.

Epeira triaranea Emerton, 1884, p. 315, p. 34, fig. 9, pl. 36, fig. 6.

This small species is found all over the United States and in Costa Rica. Petrunkevitch did not find it in Puerto Rico and Franganillo has not reported it from Cuba.

♂ ♀ Cuba; Soledad, garden, July, August 1931, (Worley).

♂ ♀ Cuba; Soledad, San Jose, August 1931, (Worley).

Genus CYCLOSA Menge 1866

CYCLOSA BREVIS spec. nov.

Figure 110

Male. Length, 2.3 mm., ceph. 1.0 mm., abd. 1.2 mm.

Cephalothorax dark brown, a little paler about the eye area; eyes, anterior row strongly recurved, a.m.e. carried forward on a lobe, largest of the eight, separated by more than a diameter, posterior row slightly recurved, subequal, p.m.e. separated by a radius, lateral eyes subequal and touching; sternum dark brown; abdomen almost

round, not prolonged beyond the spinnerets, and with indications of three slight tubercles at the tip, pale brown with irregular black dots, and a pair of widely separated white spots surrounded by red at basal third, venter black with the usual pair of widely separated white spots midway between fold and spinnerets; legs yellow with a broad brown band at apical half of femora I and II, and at tips of patellae and tibiae, femora III and IV dark brown at apex and broken dark bands at about middle, spines, I femur, dorsal, row of 4 colorless spines at apical half, prolateral, 1, ventral, 0, patella, dorsal, 1 at tip, retrolateral, 1, tibia, dorsal, 0, prolateral, 3, retrolateral, 0, ventral, 0, II femur, dorsal, 1 colorless spine at tip, ventral, 0, patella, dorsal, 1 at tip, retrolateral, 1, tibia, prolateral, 2, ventral, 0, no spines beneath on III and IV femora, hook on coxa I, coxae III and IV not modified; palpus, 1 spine at tip of patella, tibia little longer than patella, with a large lobe on ventral side, paracymbium small, embolus ending in a long and slender free tip, conductor with a long, heavy spindle-shaped black point at end, clavis broad, and ending in a small black point.

Holotype ♂ Cuba; Soledad, garden, August, 1931 (Banks).

This male *Cyclosa* differs from others described as follows: in the few spines on the legs, especially in the lack of ventral spines on the II tibia; in the very long conductor, and tip of the embolus of the palpus.

CYCLOSA CAROLI (Hentz)

Figure 114

Epeira caroli Hentz, 1850, p. 24, pl. 3, fig. 15.

Cyclosa caroli, Petrunkevitch, 1930, p. 316, figs. 190-191.

Cyclosa elongata Franganillo, 1930, p. 24.

This is the common species of *Cyclosa* in the southern part of the United States, replacing *Cyclosa conica* (Pallas), the European species, that is common as far south as New York. It is found in Central America and many of the islands of the West Indies. Petrunkevitch found it in Puerto Rico but he figures the epigynum of an immature specimen.

♀ Cuba; Havana.

♀ Cuba; Trinidad Mountains, March, 1925 (Salt).

CYCLOSA OCLATA (Walckenaer)

Aranea oculata Walckenaer, 1802, p. 428.

Turckheimia walckenaerii O. P. Cambridge, Biol. Centr. Amer., 1899, p. 47, pl. 8, fig. 6.

Cyclosa walckenaeri, F.O.P. Cambridge, ibid., 1904, 2, p. 495, pl. 47, fig. 9; Petrunkevitch, 1930, p. 315, figs. 188-189.

Through the kindness of Drs. Berland and Fage of the Paris Museum, a male of *Cyclosa oculata* from San Domingo in the Simon Collection was compared with specimens from Cuba, Florida, and Mexico, and was found to be identical. It is suggested in "Les Arachnides de France," 1929, 6, p. 760, that the species was introduced in France. It is very common in the garden at Soledad.

♂ ♀ Cuba; Sandiago de las Vegas, Banks Coll.

♂ ♀ Cuba; Soledad, garden.

♀ Cuba; Banes, February, 1893, Banks Coll.

Genus DREXELIA McCook 1893

DREXELIA DIRECTA (Hentz)

Epeira directa Hentz, 1847, 5, p. 478, pl. 31, fig. 21.

Drexelia directa, F.O.P. Cambridge, 1903, p. 461, pl. 43, figs. 12, 13.

A common species in the southern states and Central America. Petrunkevitch did not find it in Puerto Rico.

♂ Cuba; Havana, (Baker), Banks Coll.

♂ ♀ Cuba; Soledad, garden, July, August, 1931 (Banks and Worley).

Genus EDRICUS O.P. Cambridge 1890

EDRICUS CRASSICAUDA (Keyserling)

Epeira crassicauda Keyserling, 1865, p. 806, pl. 18, figs. 3, 4.

Edricus crassicauda, Petrunkevitch, 1930, p. 318, figs. 192, 193.

Originally from Colombia, this species has since been found in Panama, Guatemala, Mexico, and Puerto Rico. Females have been seen from Sierra del Cobre, Los Llanos, and Pico Turquino. Franganillo has distinguished three varieties.

Genus ERIOPHORA Simon 1864

ERIOPHORA BALAUSTINA (McCook)

Epeira balustina McCook, 1888, p. 198; id., 1893, p. 155, pl. 4, fig. 2.

Eriophora balaustina was described from Florida, and Cuban specimens agree. The abdominal markings vary greatly from the usual type of folium to a slender cross of yellow on a black dorsum. Undoubtedly Franganillo described it more than once, for when the long slender scape of the epigynum is broken, as often happens, the epigynum shows characters not usually seen. Immature specimens have a median row of round blisters, or bosses, on the posterior half of the dorsum which disappear before the last moult. The species of *Eriophora* have never been separated satisfactorily. Petrunkevitch, in his recent paper on the Spiders of Puerto Rico, considers *Eriophora balaustina* a synonym of *Eriophora edax* (Blackwell), first described from Rio de Janeiro, Brazil. Probably the genus will be separated on the secondary sexual characters. All the specimens seen from Cuba agree with F.O.P. Cambridge's description of *Eriophora purpurescens* (O.P. Cambr.) which probably is a synonym of *E. balaustina*, and not *E. edax*.

♂ ♀ Cuba; Havana.

♂ ♀ Cuba; Soledad.

Genus EUSTALA Simon 1895

EUSTALA ANASTERA (Walckenaer)

Epeira anastera Walckenaer, 1837, 2, p. 33.

Epeira prompta Hentz, 1847, p. 473, pl. 31, fig. 4.

Epeira parvula Keyserling, 1863, p. 131, pl. 6, figs. 9, 10.

Eustala anastera, Petrunkevitch, 1930, p. 331, fig. 215.

A common species in all parts of the United States, Mexico, and Central America. It occurs in the Galapagos Islands and most of the islands of the West Indies. It is abundant from all parts of Cuba in collections.

EUSTALA FUSCOVITTATA (Keyserling)

Epeira fuscovittata Keyserling, 1863, p. 129, pl. 6, figs. 7, 8.

Cyclosa thorelli McCook, 1893, p. 228, pl. 19, fig. 11.

Eustala caudata Banks, 1898, p. 255, pl. 15, fig. 5.

Eustala fuscovittata, Petrunkevitch, 1930, p. 332, figs. 216-220.

A common spider in Central America, South America, and the West Indies. It is very abundant in all collections from Cuba.

EUSTALA UNCICURVA Franganillo

Eustala uncicurva Franganillo, 1936, p. 80.

This species is compared with *Eustala anastera* (Walck.) and was found in the Sierra Maestra. A small female was taken on the coast below Pico Turquino, and agrees quite well with the description of the epigynum but the markings on the dorsum have faded.

EUSTALA UNIMACULATUM Franganillo

Eustala unimaculatum Franganillo, 1930, p. 22; *ibid.* 1936, p. 79; Bryant, 1936, p. 327, pl. 23, figs. 1, 5.

This small *Eustala* has been taken only in the eastern part of Cuba. Both epigynum and palpus are very distinct.

Genus MARXIA McCook 1893.

MARXIA STELLATA (Walckenaer)

Epeira stellata Walckenaer, 1805, p. 65, fig. 54; Hentz, 1850, p. 22, pl. 3, fig. 12.

A common species in the United States and Mexico. Petrunkevitch did not find it in Puerto Rico.

♀ Cuba; Santiago de Cuba, Banks Coll.

Genus METAZYGIA F.O.P. Cambridge 1904.

METAZYGIA ALBONIGRA (Franganillo)

Figures 107-109, 111

Larinia albonigra Franganillo, 1931, p. 44; *id.*, 1934, p. 158; *id.*, 1936, p. 81, fig. 38.

Metazygia wittfeldae Banks, *nec* McCook, 1909, p. 162.

Female. Length, 5.0 mm., ceph. 2.0 mm., abd. 3.1 mm.

Cephalothorax pale brown, head narrowed, no thoracic groove but a depression, median gray stripe from p.m.e. to depression, a long bristle behind lateral eyes, carapace only slightly convex; eyes seen from above, anterior row recurved, equidistant, a.m.e. largest of the eight, separated by less than a diameter, posterior row straight, same length as anterior, p.m.e. almost touching and slightly larger than p.l.e., lateral eyes almost touching and on a small tubercle; quadrangle of median eyes narrower behind and higher than wide; clypeus less than radius of a.m.e. below a.m.e.; mandibles with three teeth on each margin of fang groove; labium wider than long, (3.5: 3.0); abdomen oval, flattened, yellowish, with a black basal spot each side of the median line, sides brownish, four pairs of small black spots on dorsum, venter brownish; legs rather short, 1-2-4-3, same color as cephalothorax, spines, I pair, femur, 3 strong prolateral on distal third, 4 dorsal on distal third, patella, prolateral, 2, retrolateral, 1, dorsal, 1 at tip, tibia, dorsal, 0, prolateral, 3, retrolateral, 2, ventral, 3-4; epigynum about twice as wide as long, a semi-transparent rectangular plate, slightly wider at posterior than at anterior margin, with a very slender, colorless median scape that starts at anterior margin, and the free end does not reach posterior margin, best seen in a lateral view, each side is a dark ear-shaped lobe with oval openings near anterior end.

Male. Length, 3.4 mm., ceph. 2.0 mm., abd. 2.0 mm.

Coloring and markings the same as in female but darker; abdomen with five pairs of converging dark spots on dorsum; legs, I coxae with a small hook on anterior margin and a small tubercle at base; no ventral spines on femora, II tibia not modified, short lateral spine about middle, and a very long ventral spine opposite; palpus short, patella with 1 long dorsal spine, tibia no longer than patella but with a large truncate ventral lobe bearing several long hairs, embolus long with end recurved, and resting under a truncate white disc divided in two unequal lobes with blackened margins, clavis large.

♂ Cuba; Ciénaga de Zapata, Central Covadonga, 16 September, 1936, (Davenport).

♀ Cuba; San Antonio de los Baños, 1915, (Barbour and Brooks).

♂ ♀ Cuba; Soledad, garden, August, 1931, (Worley)

♀ Cuba; Soledad, February, 1925, (Salt and Myers)

♀ Cuba; Havana, (Baker), Banks Coll.

The genus *Metazygia* was proposed by F.O.P. Cambridge in 1904 for two species, *Epeira wittfeldae* McCook, designated as type, and

Epeira gregalis O.P. Cambridge. Both are much larger than this species, but according to the key for genera for Araneinae, Biol. Centr. Amer., 2, p. 454, this species belongs in *Metazygia*. The male palpus has the curved embolus as in the genotype, but the tip is hidden under the large white piece that is divided in two unequal lobes. The female has the scapes of the epigynum turned downward as in *Cyclosa*, in both *wittfeldae* and *gregalis* it is turned back as in *Eustala*. It can not be placed in *Larinia*, as the patella of the palpus has but one spine, and there is a hook on the first coxae.

It is a common species during August in the garden at Soledad, and has been found by Franganillo at the Sierra de Rangel. He has probably confused it with *Aranca incerta* (O.P. Cambr.) and *A. pallida* Keys., both left in the genus *Aranca* by F.O.P. Cambridge in his revision. These are larger, and differ in the palpus and the epigynum.

Genus METEPEIRA F.O.P. Cambridge 1903

METEPEIRA LABYRINTHIA (Hentz)

Epeira labyrinthia Hentz, 1847, p. 471, pl. 31, fig. 3.

Mangora triangularis Franganillo, 1930, p. 21.

Metepeira labyrinthia, Petrunkevitch, 1930, p. 319, figs. 194-196; Franganillo 1936, p. 75.

A common species from Labrador to Patagonia. It has been reported from most of the islands of the West Indies, and Franganillo has it from several localities in Cuba.

♂ ♀ Cuba; Havana, Banks Coll.

Genus NEOSCONA Simon 1864

NEOSCONA ARABESCA (Walckenaer)

Epeira arabesca Walckenaer, 1837, 2, p. 74.

Epeira trivittata Keyserling, 1863, p. 95, pl. 5, fig. 6-9; Emerton, 1884, p. 311, pl. 33, fig. 16, pl. 36, figs. 2, 3, 5, 6.

A common spider from Labrador to Mexico. It was not found by Petrunkevitch in Puerto Rico.

♂ ♀ Cuba; Soledad, garden, August, 1931, (Worley).

NEOSCONA MINIMA F.O.P. Cambridge

Neocoscona minima F.O.P. Cambridge, 1904, p. 471, pl. 44, figs. 11, 12.

This Central American species has been found at Soledad in the garden.

♂ ♀ Cuba; Soledad, garden, February, 1925, (Salt and Myers).

♂ ♀ Cuba; Soledad, July and August, 1931, (Worley).

♂ ♀ Cuba; Soledad, April, 1936, (Darlington).

NEOSCONA OAXACENSIS (Keyserling)

Epeira oaxacensis Keyserling, Sitz. Ber. Isis, 1863, p. 121, pl. 5, figs. 12-16.

Neoscona oaxacensis, Petrunkevitch, 1930, p. 322, figs. 200-204.

A common species in Mexico, Central America, and Panama. Simon found it in St. Vincent and Petrunkevitch in Puerto Rico.

♂ ♀ Cuba; Havana; Santiago de las Vegas, Banks Coll.

♂ ♀ Cuba; Soledad.

♂ ♀ Cuba; Camaguey, 15 October, 1935, (Acuña).

NEOSCONA VULGARIS (Hentz)

Epeira vulgaris Hentz, 1847, p. 469, pl. 30, fig. 6.

Epeira volucripes Keyserling, 1884, p. 528, pl. 13, fig. 27.

Neoscona volucripes, F.O.P. Cambridge, 1904, p. 473, pl. 44, fig. 18.

Neoscona nautica, Petrunkevitch, 1930, p. 320, figs. 197-199.

This species was described from the southern part of the United States, and has been wrongly identified with a more northern one. Keyserling's species is from Haiti, and the type is in the Museum of Comparative Zoology Collection. It is identical with specimens from Cuba. Cambridge found it common in collections from various parts of Central America and Mexico. I very greatly doubt if the form found by Petrunkevitch in Puerto Rico is really *Neoscona nautica* (Koch) of Egypt and Abyssinia.

♀ Cuba; Aguada de Pasajeros, 3 January, 1913, (Wheeler).

♂ ♀ Cuba; Santiago de las Vegas, (Horne and Houser), Banks Coll.

♀ Cuba; Bolondron, 1913, (Barbour and Shaw).

Genus PARAWIXIA F.O.P. Cambridge 1903.

PARAWIXIA CAMBRIDGEI spec. nov.

Figures 104-106

Female. Length, 13.0 mm., ceph. 4.5 mm., abd. 9.0 mm. long, 8.0 mm. wide, 6.5 mm. high.

Cephalothorax deep yellow, cephalic area sharply marked by black

lines which, however, do not meet at thoracic groove, covered with short white hairs and longer black bristles that are most numerous about the eyes, anterior margin broad, directly posterior to the lateral eyes are two low round tubercles, outer margins of cephalothorax with cress of long white hairs; eyes in three groups; median eyes form a quadrangle wider in front and as high as wide, a.m.e. separated by about a diameter and a half, p.m.e. which are slightly smaller than a.m.e., are separated by a diameter, lateral eyes on a common tubercle, both eyes directed laterally, and separated by half a diameter; clypeus equals diameter of a.m.e.; mandibles yellow, very dark about fang groove, covered with short white hairs, superior and inferior margins with three teeth; labium dark, rebordered with white, wider than long; sternum dark brown mottled with yellow, triangular, slightly longer than wide, IV coxae separated by less than a diameter; abdomen much extended and probably faded as it shows no color pattern, and has numerous small paired scars, fourteen short tubercles, each with a corneous tip, four lateral pairs, four at tip, and two median above the spinnerets, venter with a dark gray center, enclosing two pairs of pale spots, thickly covered with white hairs; legs pale, each joint with two irregular dark bands and dark spots, spines, anterior femora with two irregular ventral rows of short spines, patellae, dorsal, 1 at tip, 1 at base, 1 pair lateral, I tibia, flattened dorsally, dorsal and lateral spines irregular; epigynum a long slender scape, abruptly narrowed near tip with basal parts fused.

Male. Length, 9.0 mm., ceph. 4.5 mm., abd. 4.6 mm. long, 3.5 mm. wide.

Cephalothorax greenish-yellow, portion posterior to eyes reddish, posterior half quite green, irregular dark lines mark division of cephalic portion from thoracic, followed by a pair of widely separated dark spots, thoracic groove dark, entire carapace covered with short white hairs, with no indications of the round swellings found in the female, and low and flat; eyes in three groups, each carried forward on a distinct tubercle, quadrangle of median eyes narrower behind and wider than high, a.m.e. larger than p.m.e., a.m.e. separated by a full diameter, p.m.e. by a diameter, lateral eyes on a distinct tubercle projecting forward; I coxae with a hook and a basal lobe, trochanter with a sharp spine on posterior margin; abdomen brownish with irregular paired dark lines and scars, covered with short soft white hairs and longer dark bristles, only three pairs of lateral tubercles can be traced by the corneous tips, the four posterior tubercles are distinct and give the abdomen a truncate tip, the two median tubercles

between the posterior tubercles, and the spinnerets can be traced by the corneous tips, the anterior lateral pair found in the female are missing, venter, dark gray enclosing two pairs of dark spots; legs, 1-2-4-3, pale, each joint with median and apical dark band; I pair much the longest, anterior tibiae and metatarsi bent, spines, I femur, ventral, 2 rows, 7 or 8 prolateral, 6 or 7 retrolateral, patella, lateral, 2-2, tibia, ventral, 6 in series, II femur, ventral, row of 10 long, strong, erect spines, tibia incrassate, with two rows of ventral spines, prolateral, 6, stout and specialized, retrolateral, 5, much more slender than those on opposite side, metatarsus much bent with a few small spines at tip, III femur, ventral, 4 erect short spines, IV femur 6 short spines; palpus, 1 long spine at tip of patella, tip of cymbium truncate, tibia produced in a ventral lobe the length of the joint, paracymbium unevenly bilobed, upper portion small and pale, lower dark, broadly spatulate with tip rolled over towards upper side of cymbium, clavis long, tip widened and tri-lobed, base prolonged in a distinct angle.

Holotype ♀ Cuba; Oriente, coast below Pico Turquino, June, 1936, (Darlington).

Allotype ♂ Cuba; Oriente, coast below Pico Turquino, June, 1936, (Darlington).

This species is named in honor of F.O.P. Cambridge who described the genus. It varies in minor details from the type species. In the female, the cephalothorax has two low tubercles posterior to the eye area instead of being flat and low; the upper margin of the fang groove has three teeth instead of four, and there are a greater number of tubercles on the abdomen than in the species found in Central America. The male palpus differs in the very long tri-lobed clavis.

Genus SCOLODERUS Simon 1887

SCOLODERUS TUBERCULIFER (O.P. Cambridge)

Carepalxis tuberculifer O.P. Cambridge, 1899, p. 48, pl. 4, fig. 9.

Scoloderus tuberculifer, F.O.P. Cambridge, 1904, p. 521.

Originally described from Panama, this species has been found in Guatemala and Florida.

♂ Cuba; Havana, (Cervera).

Genus SINGA C. Koch 1837

SINGA CUBANA Banks

Singa cubana Banks, 1909, p. 162.

Female. Length, 3.1 mm., ceph. 1.4 mm., abd. 2.0 mm. long, 2.1 mm. wide.

Cephalothorax bright yellow-brown, black about eye area; eyes, anterior row recurved, a.m.e. smallest of the eight and carried forward, eyes separated by more than a diameter, and from a.l.e. by fully two diameters, posterior row, straight, p.m.e. largest of the eight, separated by a scant diameter, and from p.l.e. by more than two diameters, lateral eyes on a tubercle and touching; quadrangle of median eyes same width in front as behind and higher than wide; clypeus equals diameter of a.m.e.; maxillae pale brown with a dark spot near the base; labium dark; sternum triangular, brown, shading to black near apex; abdomen as wide as long, dull brown with a pair of dark spots near extreme edge of basal third, muscle spots indistinct, a few scattered irregular white spots on sides, venter with an elongate black spot that encloses the spinnerets; legs yellow, patellae and tibiae slightly darkened, dark spots on ventral tips of coxae and trochanters; spines, I pair, 1 long prolateral spine, and a prolateral row of stiff bristles on tibia and metatarsus; epigynum with a very broad median septum as figured, openings at base.

Holotype ♀ Cuba; Havana, Banks Coll.

In the original description, Banks compares *Singa cubana* with *Singa nigripes* Keyserling. The structure of the epigynum shows that it belongs to another section of the genus and is closely related to *Singa variabilis* Emerton.

Genus VERRUCOSA McCook 1888

VERRUCOSA ARENATA (Walckenaer)

Epeira arenata Walckenaer, 1837, 2, p. 133.

Epeira verrucosa Hentz, 1850, p. 19, pl. 3, fig. 2.

Mahadeva reticulata O.P. Cambridge, 1889, p. 54, pl. 3, fig. 10.

Verrucosa arenata, Petrunkevitch, 1930, p. 129, figs. 211, 212.

This species has been found from Long Island, New York, south through Central America to Panama. In the West Indies it has been reported from Puerto Rico and San Domingo. It is not impossible that more than one of Franganillo's species are synonyms.

♀ Cuba; Bueycito, 1913, (Barbour).

♂ ♀ Cuba; Soledad, Trinidad Mountains, May, 1936, (Darlington).

Genus WAGNERIANA F.O.P. Cambridge 1903

WAGNERIANA TAURICORNIS (O.P. Cambridge)

Epeira tauricornis O.P. Cambridge, 1889, p. 44, pl. 6, figs. 2, 3, pl. 8, fig. 2.

Wagneriana tauricornis, F.O.P. Cambridge, 1904, p. 498, pl. 47, figs. 14, 15.

This is a common species in Mexico and Central America. It has been found in Florida and Louisiana. Petrunkevitch did not find it in Puerto Rico.

♀ Cuba; Santiago de las Vegas, Banks Coll.

WAGNERIANA UNDECIMTUBERCULATA (Keyserling)

Epeira undecimtuberculata Keyserling, 1865, p. 805, pl. 18, figs. 1, 2.

Wagneriana undecimtuberculata, F.O.P. Cambridge, 1904, p. 489, pl. 47, figs. 17, 18.

This species is found in Central America, Mexico, and Florida.

immat. ♂ Cuba; Santiago de las Vegas, Banks Coll.

Genus WIXIA O.P. Cambridge 1882.

WIXIA INCERTA Bryant

Wixia incerta Bryant, 1936, p. 328, pl. 23, figs. 6, 8.

The type, a female, was found at the Sierra del Cobre. Other specimens have been found since, but all from the eastern part of the island.

Holotype ♀ Cuba; Sierra del Cobre, Loma del Gato, 2,600–3,325 feet, (Bruner).

♀ Cuba; Sierra del Gato, 3,000–3,800 feet, 3–7 July, (Darlington).

♀ Cuba; South side Pico Turquino, 3,000–5,000 feet, June, 1936, (Darlington).

♀ Cuba; Pico Turquino, 6,000 feet, 16–21 June, 1936, (Darlington).

WIXIA NIGRIVENTRIS Bryant

Figure 113

Wixia nigriventris Bryant, 1936, p. 329, pl. 23, fig. 10.

Male. Length, 5.2 mm., ceph. 2.5 mm. long, 2.0 mm. wide, abd. 3.0 mm.

Cephalothorax chestnut-brown, finely granulate, rather flat, thoracic groove long, anterior margin much narrowed; eyes carried forward on a lobe, a.m.e. larger than p.m.e., lateral eyes touching; quadrangle of median eyes narrower behind and wider than high; clypeus very narrow and retreating; mandibles small; labium fused to sternum, slightly wider than long, tip rounded and rebordered; maxillae twice as long as labium, sides parallel; sternum light brown, little more than two-thirds as wide as long, widest between II coxae, slightly notched between I coxae a little before the middle is a dark forward projecting lobe, raised from the plane of the sternum, and a similar but smaller lobe in front of IV coxae, I coxae with a hook, IV coxae with a strong, stout spine, IV trochanters with a similar spine; abdomen triangular, with a pair of short, sharp tubercles near base between shoulder angles, tip of abdomen evenly rounded, basal half covered with fine hairs and scattered dark bristles, venter black between fold and spinnerets; legs, III right missing, 1-2-4-3; anterior pairs much longer than posterior, anterior pairs greenish-brown, I femur slightly enlarged, spines, I femur, dorsal, long, scattered slender spines, patella, lateral, 2-2, distal, 1, tibia, dorsal, 2 near tip, prolateral, 7-8, longer than diameter of the joint, ventral, 2-2-1, and 1 strong spine at tip, metatarsus, prolateral, 5, ventral, 3-4, not in series, II femur slightly enlarged, dorsal scattered spines, ventral, 1-1-1, on basal half surrounded by fine white hairs, patella, lateral, 1-1, 1 at apex, tibia, curved and flattened dorsally, basally incrassate, prolateral, 7 short spines, ventral, 4 prolateral at basal half, first long and slender, others heavy and graduated with curved tips, retrolateral, at base 3 heavy spines, at tip prolateral, a short, stout, curved spine, retrolateral, 2, metatarsus shorter than tibia with scattered ventral and lateral spines, IV femur, dorsal, 1 submedian spine, very long and slender, 3 at tip, ventral, 7 short spines in series on basal third, 1-1, near distal end, 3 graduated retrolateral near distal end; palpus shorter than cephalothorax, patella with 1 long spine; tibia short with a large ventral lobe; clavis very prominent, protruding, and deeply bifurcate.

Allotype ♂ Cuba; Oriente, Sierra de Cobre, 3,000-3,800 feet, 3-7 July, 1936, (Darlington).

The genus was based on a female with a very long basal tubercle that extends over the cephalothorax. The figure shows a very high clypeus, more than twice as high as the quadrangle of median eyes. In this Cuban species, the clypeus is very low, both in the female which is immature and in the male which is adult. Both, however,

have the double row of spines on the anterior tibiae, and in the male, the II tibia is basally incrassate with specialized spines and also has spines on the IV coxae and trochanters. The only two known males of this genus are from Central America. The two median lobes on the sternum are very unusual.

Sub-family METINAE

Genus AZILIA Keyserling 1881

AZILIA MONTANA spec. nov.

Figures 112, 115

Female. Length, 6.5 mm., ceph. 2.4 mm., abd. 4.6 mm. long, 3.2 mm. wide.

Cephalothorax with a median halberd-shaped dark stripe from posterior eye row to margin, lateral margins dark with markings much heavier posteriorly, cephalic portion moderately high, anterior margin little more than half the greatest width, a few bristles about the margin and between the eyes, thoracic groove short, followed by a deep depression; eyes cover more than three-quarters the width of the head, rows widely separated, anterior row recurved, a.m.e. smaller than a.l.e., slightly nearer a.l.e. than to each other, posterior row a little longer than anterior row, strongly recurved, p.m.e. largest of the eight, separated by a diameter and a half, and from p.l.e. by a diameter, lateral eyes on distinct tubercles and widely separated; quadrangle of median eyes narrower in front and higher than wide; clypeus below a.m.e. about equals the diameter of a.m.e.; mandibles brown, veined with a darker brown, swollen, a distinct basal boss, and a pair of long bristles on inner margin that cross, superior margin of fang groove with three large teeth, inferior margin with three very small teeth; labium brown, wider than long, tip rebordered; maxillae brown, nearly three times as long as labium, sides almost parallel; sternum brown, covered with long, dark hairs, triangular, as long as wide, IV coxae almost touching; abdomen oval, extending over cephalothorax, quite high at base and pointed above spinnerets, a narrow pale median line which extends beyond the middle with two pairs of lateral branches, on each side are irregular blotches of red, broken by black, like an indistinct folium, sides gray, venter with a broad reddish-brown stripe from fold to spinnerets, colulus present; legs, 1-2-4-3, long, femora and tibiae with basal and median pale bands, ventral side of femora pale with,

dark spots, spines, I pair, femur, prolateral, 5, patella, 0, tibia, dorsal, 1 at base, prolateral, 5, metatarsus, dorsal, 1-1, near base, all spines very slender and inconspicuous, all joints covered with fine hairs and bristles; epigynum a deep red-brown plate, wider than long, with posterior margins heavily chitinized, at anterior end are two black depressions, separated by more than a diameter and a half, these are probably the openings.

Holotype ♀ Cuba; Oriente, South side Pico Turquino, 3,000-5,000 feet, June, 1936, (Darlington).

The genus is easily separated from others of the family by the widely separated eye rows. O.P. Cambridge describes two species from Central America, both slightly larger than *Azilia montana*. The smaller, *Azilia affinis*, has similar markings on the cephalothorax and abdomen, but the venter has a distinct pale band, and from the figure of the epigynum, it may not be adult. The markings on the cephalothorax and abdomen may be generic.

GENUS LUCARACHNE gen. nov.

Cephalothorax oval, sides evenly rounded, thoracic groove long; eye area raised; all eyes diurnal, anterior row strongly recurved, a.m.e. largest of the eight, posterior row straight; quadrangle of median eyes higher than wide; clypeus convex and much higher than quadrangle; mandibles long and vertical, with no boss; labium rebordered, at least twice as wide as long; sternum longer than wide and extending between fourth coxae; colulus present; first pair of legs in both sexes very long and enlarged, tibia with at least one raised prolateral spine near distal end, metatarsus with a series of small, lateral spines, no comb on fourth tarsus, four pairs of trichobothria on tibia, none elsewhere; male palpus as long as cephalothorax with patella small, tibia much swollen and almost covering tarsus; epigynum a long thick scape.

Genotype *Lucarachne tibialis* spec. nov.

The position of this genus is uncertain. As it lacks a comb on the fourth tarsus and has a rebordered lip, it can not be placed in the Theridiidae. A small dark hook in the male palpus may be a paracymbium, and the thick hairy scape of the epigynum is very similar to *Meta*. The palpal organ is very simple, and the clypeus is high, two characters that are not uncommon in the Argiopidae. Probably *Theridion eidrelicola* Simon, from Venezuela, belongs in this genus, although he does not mention the curvature of the anterior eye row or the shape of the epigynum.

LUCARACHNE TIBIALIS spec. nov.

Figures 116-120, 123

Male. Length 1.8 mm., ceph. 0.8 mm., abd. 1.0 mm.

Cephalothorax a dull brown, shaded with gray, showing radial striae, longer than wide, (7.0 : 5.5), cephalic portion slightly higher, thoracic groove long and distinctly marked, sides evenly rounded; eyes on a low tubercle, all diurnal, covering the middle two-thirds of the head and carried forward slightly, anterior row strongly recurved, eyes surrounded by black, a.m.e. largest of the eight, separated by less than a diameter and almost touching a.l.e., posterior row straight, slightly longer than anterior, eyes equidistant, not surrounded by black, p.m.e. white, separated by less than a diameter, lateral eyes subequal and touching; quadrangle of median eyes wider in front and higher than wide; clypeus convex and twice as high as quadrangle; mandibles brown, vertical and long, with no boss; sides parallel; fang groove slightly oblique, superior margin with two sharp teeth, inferior with a distinct carina, on under side of mandibles an oblique row of hairs from fang groove to base; labium fused to sternum, more than twice as wide as long, and strongly rebordered; maxillae several times longer than labium, when in position almost touching mandibles, much wider at tip than at base, outer margins parallel, tips straight and almost touching; sternum dark brown, shaded with dark gray, heart-shaped, smooth, slightly convex, as wide as long, carried between IV coxae as a wide lobe, emarginate between III coxae; abdomen oval, base high, pale gray with four pairs of dark oblique spots connected on median line, sides shaded with gray, entire dorsum covered with long hairs almost heavy enough to be called bristles, venter dark gray with two pairs of pale spots, colulus small, tracheal spiracle close to spinnerets; legs, 1-4-2-3, I pair very long, femur dark brown, slightly enlarged and bent, covered with fine hairs, tibia paler with median and apical dark rings, long and slightly enlarged at distal end, on prolateral side near tip is a long stout spine from a raised base, above this spine are two stout bristles, and just below are several long bristles, metatarsus pale, curved, and one quarter from tip is a spine which curves and is parallel to joint, from base to curved spine, a row of nine curved cusps, femora and tibiae II, III and IV pale, with three dark rings, IV femur a ventral apical row of long bristles, all patellae with a long spine at tip, and all tibiae with a long, basal dorsal spine, four pairs of trichobothria on tibiae, none elsewhere, no comb on IV metatarsus;

palpus as long as cephalothorax, femur slender and curved, patella little longer than wide, tibia more than twice as long as patella, much narrowed at base and suddenly swollen so that it is three-quarters as wide as long, tip truncate, seen from above on outer side is a long curved black spine more than half the length of the joint with the slender tip resting on the under side of the tarsus, tarsus reduced to a tongue-like piece about the length of the patella, with sides parallel and tip truncate, in ventral view the tibia covers the base of the tarsus and little can be seen of the palpal organ, the long black spine is probably the embolus and is supported for one-third of its length by a colorless piece, difficult to separate from the tibia, from a dorsal view in the tarsus can be seen a small dark sickle-shaped piece which may be the abortive paracymbium.

Female. Length, 2.5 mm., ceph. 1.0 mm., abd. 1.5 mm.

Cephalothorax and eyes same as in male; maxillae not as long; abdomen globose and paired spots darker; legs same as in male, I pair enlarged and longer than in male, tibia gradually enlarged towards distal end and on prolateral side produced in a larger tubercle than in male, bearing a short, stout spine, then suddenly constricted above the tubercle to tip; on side opposite to tubercle, is a crest of 10 or 12 long bristles and a row of long bristles from base to tubercle, metatarsus straight and much longer than in male with a prolateral row of 10 short spines from base to tip, all patellae with a long spine at tip, and tibiae with a long dorsal basal spine as in the male; epigynum a long thick finger which extends two-thirds the length of the venter, slightly constricted near tip, ending in a blunt point.

Holotype ♂ Cuba; Oriente, Pico Turquino, 1,500 feet, 25 June, 1936, (Darlington).

Allotype ♀ Cuba; Orient, Pico Turquino, 1,500 feet, 25 June, 1936, (Darlington).

Paratype ♂ ♀ Cuba; Orient, Pico Turquino, 1,500 feet, 25 June, 1936, (Darlington).

The species is undoubtedly related to *Theridion cidrelicola* Simon from Venezuela, (Ann. Soc. Ent. France, 1895, **64**, p. 139). In the male of this species, the first tibia and metatarsus has a series of long slender spines terminated by a stronger raised spine; the female lacks these spines and on the fourth coxae has a large sharp spine; the male palpus has the tibia much enlarged, with a very narrow base, truncate at tip and the tarsus "extrêmement petit, réduit à une petite languette interne et en dessous un bec court et droit." The first leg and palpus are figured in Hist. Nat. Araignées, 1894, **1**, p. 536, figs. 547, 552, 553.

Lucarachne tibialis has the same modification of the first leg in both male and female, and the male has the same enlargement of the tibia of the palpus.

Genus PSEUDOMETA F.O.P. Cambridge 1903

PSEUDOMETA DISTINCTA spec. nov.

Figures 121, 127

Male. Length, 2.5 mm., ceph. 1.5 mm., abd. 1.5 mm.

Cephalothorax pale yellow, cephalic portion high and heavily outlined in black that is especially heavy near the thoracic depression, more than three-quarters as wide as long; eyes outlined with black, lateral eyes touching; quadrangle of median eyes higher than wide; mandibles pale with a dark spot near base on outer margin, vertical, very long and narrow, distal half constricted, boss rudimentary, margins granular, fang groove oblique, superior margin with three sharp, subequal teeth, inferior margin with four, the two middle ones very small and the last tooth large and blunt; labium pale, wider than long; maxillae more than twice as long as labium, pale, slightly divergent with tip wider than base; sternum pale, triangular, very little longer than wide, IV coxae separated by half a diameter; abdomen pale brown covered with yellow spots, a dark basal band and two pairs of dark spots, the first pair about the middle and widely separated, the second pair half way to tip of abdomen, venter pale with a broad light gray stripe in the middle; legs, 1-2-4-3, pale, I femur slightly enlarged and darker, spines, I femur, 3 long prolateral spines, 2 retrolateral, 1 median near tip, no ventral, patella, 1 dorsal at tip, tibia, dorsal, 2 slender, prolateral, 1 pair near tip, ventral, 0, metatarsus, 1 short, strong prolateral spine near base from a small tubercle, ventral, 0, II pair, spines same as on I pair but much smaller, tibiae, metatarsi, and tarsi covered with rows of bristles, palpus about as long as cephalothorax, tibia longer than patella and wider at tip; apophysis from cymbium divided, upper portion short, broad and dark with a bilobed tip, lower branch almost as long as tibia, recurved, ending in a slender tip, on upper side of cymbium a pale horn projecting forward, and from base a slender process with a dark tip, cymbium pale, covered with long hairs, and only partly covering the palpal organ, embolus and conductor at tip of bulb, each making a complete circle to form a flat disc at right angle to cymbium.

Female. Length, 3.2 mm., ceph. 1.6 mm., abd. 2.2 mm.

Cephalothorax and eyes same as in male but dark outlines of cephalic area much wider; mandibles pale with a dark spot near base, swollen but not constricted as in male, fang groove slightly oblique, superior margin with three subequal teeth, inferior margin with four teeth, the two middle very small, last tooth not enlarged as in the male; abdomen globose, broad across the base, pale brown, covered with pale yellow spots, no dark basal band, and the two pairs of dark spots found in male indistinct, venter with broad dark stripe from fold to spinnerets; legs, 1-2-4-3, pale, I femur with three dark lateral spots, basal, median and distal, with 4 slender prolateral spines on distal half, tibia pale with a distinct dark band at tip and many slender bristles, metatarsus and tarsus pale with dark bands at tips and rows of long bristles, II pair, femur with one dark lateral spot near distal end, no spines, tibia, metatarsus and tarsus same as I pair; epigynum, area swollen, median septum with a very narrow base, suddenly widening so that at margin it is wider than long, margin only slightly convex, openings apparently are ovals on each side of septum, beneath the skin can be seen the dark sacs of the spermatheca.

Holotype ♂ Cuba; Oriente, South side of Pico Turquino, 3,000-5,000 feet, June, 1936, (Darlington).

Allotype ♀ Cuba; Oriente, South side of Pico Turquino, 3,000-5,000 feet, June, 1936, (Darlington).

Paratype ♂ ♀ Cuba; South side of Pico Turquino, 3,000-5,000 feet, June, 1936, (Darlington).

Paratype ♀ Cuba; Pico Turquino, 6,000 feet, 25 June, 1936, (Darlington).

Franganillo has reported two Central American species of *Pseudometa* from the Sierra Maestra. *P. distincta* can be easily separated from them by the palpus and the epigynum.

PSEUDOMETA LINGUIFORMIS (Franganillo)

Figure 128

Meta linguiformis Franganillo, 1930, p. 20; *ibid.*, 1936, p. 94, fig. 47.

Female. Length, 5.0 mm., ceph. 2.4 mm., abd. 3.0 mm. long, 2.8 mm. wide.

Cephalothorax pale brown, cephalic portion sharply marked from thoracic and heavily veined with black, ending in a black spear-mark

at depression; eyes subequal and ringed with black, anterior row recurved, a.m.e. separated by a diameter and from a.l.e. by a diameter and a half, posterior row same length, straight, p.m.e. largest of the eight, separated by about a diameter and from p.l.e. by a diameter and a half, lateral eyes touching and subequal; quadrangle of median eyes same width in front as behind and wider than high; clypeus less than diameter of a.m.e.; mandibles swollen in front, heavily veined in black, boss rudimentary, superior margin of fang groove with three subequal teeth, inferior margin with four, the two middle very small; labium wider than long, tip rebordered; maxillae slightly divergent, tips widened; sternum triangular, dark with an irregular pale mark in center, IV coxae separated by less than a diameter; abdomen pale with dark spots irregularly placed, almost as wide as long, venter pale with a dark spot in center; legs, 1-2-4-3, pale with many dark spots that are most numerous on ventral side, spines, I femur, 1 pro-lateral spine, anterior metatarsi and tarsi with rows of fine bristles; epigynum a convex area, wider than long, with a median tongue-like lobe extending up from the fold, the openings are apparently circular depressions each side just anterior to the fold.

♀ Cuba; Soledad Mountains, 10 March, 1925, (Salt).

♀ Cuba; Pinar del Rio, San Vicente, July, (Archer).

3 ♀ Cuba; Solidad, San Jose, 31 July, 1931, (Worley).

♀ Cuba; Mountains North of Imias, 3,000-4,000 feet, 25 July, (Darlington).

♀ Cuba; Pico Turquino, 1,500 feet, 25 June, 1936, (Darlington).

♀ Cuba; Sierra de Cobre, 3,000-3,800 feet, 3 July, 1936, (Darlington).

♀ Cuba; Oriente, Los Llanos, 1,000-2,000 feet, 16 July, 1936, (Darlington).

According to Franganillo, this species is found all over the island. Only females have been seen. All specimens have the ventral side of the femora heavily spotted but the dark triangle on the venter is sometimes obscure.

Sub-family NEPHILINAE

Genus NEPHILA Leach 1815.

NEPHILA CLAVIPES (Linnaeus)

Aranea clavipes Linnaeus, Syst. Nat., 1758, p. 1034, no. 27.

Nephila clavipes, Petrunkevitch, 1930, p. 247, figs. 101, 102.

This species is found in the southern part of the United States,

Bermuda, Central America, and the northern part of South America. It is very common in the garden at Soledad and has been taken at Havana. Both males and females were collected in August in the Sierra de Rangel by Darlington, and at an altitude of 2,000 feet at Cuchillo de Gujimero. Petrunkevitch found it only on the grounds of the College of Agriculture in Mayaguez in Puerto Rico, and because of this limited distribution, he thinks that it has been recently introduced.

Sub-family TETRAGNATHINAE

Genus AGRIOGNATHA O.P. Cambridge 1896

AGRIOGNATHA SIMONI spec. nov.

Figures 122, 124, 125

Male. Length, 5.0 mm., ceph. 2.0 mm., abd. 3.0 mm.

Cephalothorax smooth, cephalic portion much narrowed, shaded dark brown to thoracic groove, dark about lateral margins, thoracic groove a deep circular depression; eyes covering entire anterior margin, anterior row strongly recurved, a.m.e. separated by more than a diameter and from a.l.e. by almost two diameters, posterior row recurved, p.m.e. separated by less than a diameter, slightly larger than a.m.e., lateral eyes on a common tubercle, touching and subequal; quadrangle of median eyes wider in front and as high as wide; clypeus below a.m.e. only a line; mandibles dark brown, strongly divergent, so that width at tips is greater than length of cephalothorax, no boss but an upward turned tooth on outer corner at base, from this is a distinct carina to base of fang, above origin of fang is a large stout tooth directed outward, similar to *Pachygnatha*, fang groove horizontal, superior margin with three subequal teeth near base of fang, inferior margin with four teeth, three near fang and a much smaller one near median margin, area between carina and fang groove slightly excavate, fang long and sinuous, slightly constricted at middle with a tooth on inner side; labium dark, as wide as long with a rebordered tip; maxillae more than twice as long as labium, sides parallel and tip slightly widened; sternum dark, triangular, slightly emarginate opposite II and III coxae, IV coxae almost touching; abdomen almost three times as long as wide, truncate at base and rounded at tip; median stripe of dull gray bordered by a waving black line which is broken about middle, and near tip is connected so that abdomen appears all black, sides dull yellow with irregular flecks of white and

silver, a large dark spot on distal end, venter dull gray with a pair of widely separated pale stripes which end in spots each side of spinnerets, which are at tip of abdomen; legs, 1-2-4-3, anterior pairs long and slender, yellow shaded with dark gray, spines, I pair, femur, ventral, a median row of 5 short spines, dorsal and lateral irregular, patella, dorsal, 1 at tip, retrolateral, 1, tibia, irregular, metatarsus, irregular with a prolateral series of spinoform setae and dark spinules, II pair, femur, dorsal, 2 short near base, lateral, irregular, 1 long strong retrolateral spine near tip and a chitinized ridge on ventral side of patella against which spine rests, patella, dorsal, 1 at tip, retrolateral, 1, spines on tibia and metatarsus irregular, posterior pairs with irregularly placed spines, 6 or 7 short, straight trichobothria at base on prolateral side of IV femur; palpus not as long as cephalothorax, pale, a long trichobothria at tip of patella and several on tibia, palpal organ of the *Pachygnatha* type, bulb globose, with cymbium reduced to a narrow piece which extends over bulb though hardly reaches the top of it, paracymbium even more narrow, with parallel sides reaching only middle of bulb, embolus and conductor confined to tip of bulb, embolus with a short circular turn near tip.

Female. Length, 6.5 mm., ceph. 2.2 mm., abd. 4.6 mm.

Cephalothorax pale yellow, shaded with gray about the lateral margins and very faintly in the median line to thoracic depression, anterior margin about half the greatest width but not narrowed as much as in the male; eyes cover the entire margin, anterior row not as strongly recurved as in the male, a.m.e. separated by less than a diameter and from a.l.e. by more than a diameter, posterior row slightly recurved, p.m.e. larger than a.m.e., separated by less than a diameter, lateral eyes touching on a low tubercle, a.l.e. larger than p.l.e.; quadrangle of median eyes wider in front and as high as wide; clypeus below a.m.e. little more than a line; mandibles pale, vertical, slightly geniculate, a distinct carina at base on outer margin in place of the tooth found in male, superior margin with three teeth, two near base of fang and one near median margin, inferior margin with four teeth, two near base of fang small, other two much larger, fang evenly curved; labium pale, as long as wide, tip rebordered; maxillae pale, twice as long as labium, tips much widened with black margin; sternum pale, triangular, emarginate opposite III coxae; abdomen yellowish, flecked with white and silver spots, a median pair of parallel, narrow, wavy, dark lines which are connected near the tip to form the first of three cross bars, base truncate, tip rounded, venter gray with a pair of spots in front of spinnerets which are at the tip of the abdomen; legs,

1-2-4-3, anterior pairs very long, pale with indistinct dark bands at tip of femora, at base, middle and tip of tibiae, III pair with tibia and metatarsus dark, IV pair pale, spines scattered on all legs, I and II femora, ventral, 5 short spines in series on basal half, no large retro-lateral spine on II femur; epigynum, a slightly recurved line showing no structure.

Holotype ♂ Cuba; Pico Turquino, 6,000 feet, 16-21 June, 1936, (Darlington).

Allotype ♀ Cuba; Pico Turquino, 6,000 feet, 16-21 June, 1936, (Darlington).

Paratypes 4 ♂ 5 ♀ Cuba; Pico Turquino, (Darlington).

Paratypes ♂ 2 ♀ Cuba; Mountains North of Imias, 3,000-4,000 feet, July, 1936, (Darlington).

Franganillo in 1936 described *Cyrtognatha aproducta* from Havana. The description is very brief and neither sex nor size is noted. In 1930, he described *Cyrtognatha producta* from the Sierra Maestra, again without mentioning sex or size and with barely generic characters. In his revision of 1936, neither species is mentioned. The name *Cyrtognatha* is preoccupied and the genus *Agriognatha* O.P. Cambridge is synonymous. It may be that there is but one species of *Agriognatha* found in Cuba, in which case, *aproducta* would have priority.

At present, the genus includes six species; three from Central America, one from Peru, one from St. Vincent, and one from Cuba. *A. nigrovittata* from Peru and *A. serrata* from St. Vincent are described with a carina on the mandibles, and all apparently have the large tooth at base of the fang.

Genus ALCIMOSPHEUS Simon 1895

ALCIMOSPHEUS LICINUS Simon

Alcimosphenus licinus Simon, Hist. Nat. Araignées, 1895, 1, p. 930; Petrunkevitch, 1930, p. 263, figs. 115, 116.

This species was described from Jamaica and San Domingo, and has since been reported from Haiti, Puerto Rico, Cuba, and Dominica. Petrunkevitch figures the female in his paper.

♀ Cuba; Santiago de las Vegas, Banks Coll.

♀ Cuba; Pinar del Rio, San Vicente, (Archer).

♀ Cuba; Sierra de Cobre, Loma del Gato, 2,600-3,325 feet, (Bruner).

♀ Cuba; Los Llanos, 1,000-2,000 feet, 20 July, 1936, (Darlington).

♀ Cuba; Pinar del Rio, Sierra de Rangel, 24 August, 1936, (Darlington).

Genus ALLEPEIRA Banks 1932

ALLEPEIRA BASILICA (McCook)

Epeira basilica McCook, 1878, p. 124.

Hentzia basilica, McCook, 1893, p. 244, pl. 14, fig. 2, pl. 23, fig. 8. (*Hentzia* preoccupied by Marx, 1883, for *Attus palmarum* Hentz).

Originally found in Texas, this species has been taken in Washington and Oklahoma.

♂ ♀ Cuba; Havana, 12 June, 1924, (Banks).

Genus GLENOGNATHA Simon 1887

GLENOGNATHA MINUTA Banks

Figure 126

Glenognatha minuta Banks, 1898, p. 248, pl. 15, fig. 15.

Male. Length, 2.2 mm., ceph. 0.9 mm., abd. 1.3 mm.

Cephalothorax yellowish-brown, no thoracic groove, cephalic portion high and distinctly marked; eyes surrounded by black, anterior row recurved, a.m.e. separated by a little more than a radius, a.l.e. smaller and separated from a.m.e. by a diameter of a.m.e.; posterior row straight, p.m.e. largest of the eight, separated by less than a radius, and from p.l.e. by more than a diameter, lateral eyes touching and subequal; quadrangle of median eyes about square; clypeus convex, about as high as quadrangle; mandibles brown, no boss, divergent from base, fang groove oblique and long, superior margin with three teeth, first two the largest, inferior margin with a minute cusp at base of fang, followed by three, the first two very large and in a straight line with the last tooth, fang long and slender; labium much wider than long; maxillae three times as long as labium and inclined over labium; sternum brown, triangular, as wide as long, widest between first coxae and squarely truncate between fourth coxae; abdomen grayish-brown, faintly tinged with pink at base, three pairs of irregular pale spots on posterior half and many long hairs, venter brownish with a pair of widely separated elongate pale spots, ventral furrow distinct and very near the spinnerets; legs pale yellow, darkened at tips of joints, covered with fine hairs, no spines but hairs in rows on posterior pairs, anterior pairs very long; palpus, femur pale, half as long as cephalothorax, tibia much narrowed at base, more than twice as wide at tip, and twice as long as wide, basal lobe of cymbium barely reaches top of bulb, and at distal third bends abruptly.

♂ Cuba; Soledad, 1-11 August, 1934, (Darlington).

The type of this species is from San José del Cabo, Baja California. It is a little larger than the Cuban specimen, and differs in the proportion of the basal lobe of the paracymbium. In the type, the lobe is narrower, the bent portion shorter, and the tibia is a little shorter but the difference is hardly enough to erect a new species.

Genus *LEUCAUGE* White 1841

Five species of *Leucauge* have been seen from Cuba. *Leucauge argyra* (Walckenaer) is the largest, and is easily recognized in the male by the large hook on the dorsal side of the cymbium, and in the female by the backward turned tip of the epigynum.

Leucauge regnyi (Simon) is the most common species, and is easily recognized by the two pairs of shoulder angles at the base of the abdomen. In the males, these angles are sometimes indicated by dark spots.

Only females of *Leucauge moerens* (O.P. Cambridge) have been seen. These are very dark, and on the venter are two pairs of pale spots; the epigynum is a broad oval opening with a very wide septum, often faintly indicated.

Leucauge spiculosa spec. nov. resembles *L. venusta* (Walck.), but it has spicules on the posterior portion of the cephalothorax, and the epigynum is much wider than long with the openings nearer the base than to the fold.

Leucauge venusta (Walck.) = *L. hortorum* (Hentz) has been reported from Santiago de las Vegas, but the specimens in the museum collection are immature. Franganillo reports it as common all over the island and declares it to have four basal angles, but has evidently confused it with another species. Franganillo described still another species, *Leucauge pinarensis*, from Pinar del Rio which he also later found common all over the island. He compares it with *L. moerens* (Cambr.) and figures a palp with a very short tibia.

LEUCAUGE ARGYRA (Walckenaer)

Tetragnatha argyra Walckenaer, 1837, 2, p. 219.

Leucauge argyra, Petrunkevitch, 1930, p. 285, figs. 119, 120.

This species has a wide distribution from Florida and California through Mexico, Central America, and the West Indies. It is very abundant in collections from all parts of Cuba.

LEUCAUGE MOERENS (O.P. Cambridge)

Opas moerens O.P. Cambridge, 1896, p. 185, 229, pl. 23, fig. 6.

Argyropeira pulcherrima, *ibid.*, p. 230, (not *Argyropeira pulcherrima* Keyserling).

Leucauge moerens, F.O.P. Cambridge, *ibid.*, 1903, p. 441, pl. 42, figs. 6, 7; Petrunkevitch, 1930, p. 271, figs. 128-130.

Petrunkevitch found a single specimen at Mayaguez, Puerto Rico, and inferred that it was an introduced species. Several females have been found in the garden at Soledad. Franganillo has not seen it.

♀ Cuba; Soledad, garden and quarry, August 1931, (Worley).

LEUCAUGE REGNYI (Simon)

Argyropeira regnyi Simon, 1897, p. 871.

Leucauge regnyi, Petrunkevitch, 1930, p. 267, figs. 123-127.

In his Spiders of Porto Rico, Petrunkevitch states that he has collected this species abundantly in Guadeloupe, Dominica, and Jamaica. It is the most common *Leucauge* at Soledad. Franganillo has taken it from all parts of the island.

LEUCAUGE SPICULOSA spec. nov.

Figures 129, 130

Male. Length, 4.0 mm., ceph. 2.0 mm., abd. 2.2 mm.

Cephalothorax pale yellow, shaded with gray at thoracic depression and about the posterior margin, dark spicules on posterior margin and area covered by abdomen, all directed forward; eyes in three groups, quadrangle of median eyes narrower in front and higher than wide; mandibles pale brown with a black spot above base of fang, evenly convex, no boss, and scantily covered with short black bristles, superior margin of fang groove with two sub-equal teeth; inferior margin with four small teeth; labium dark, wider than long, tip rebordered maxillae more than twice as long as labium, tips straight and outer corner prolonged; sternum brown, triangular, ending in a point between IV coxae; abdomen truncate at base and evenly rounded at tip, half as wide as long, pale with a median black stripe on posterior half, connected at tip with broken black stripes on posterior half, venter with a broad yellow band across middle, dark gray in front and behind;

legs very long and slender with scattered spines, the usual two ventral rows of curved cilia near base of IV femur; palpus longer than cephalothorax, patella short with a long trichobothria at tip, tibia longer than terminal joint with a dorsal spine near tip as long as terminal joint, palpal organ of the usual type with embolus and conductor at tip supported by a membranous sheath.

Female. Length, 7.0 mm., ceph. 2.6 mm., abd. 4.6 mm.

Cephalothorax and eyes the same as in male; mandibles pale, more swollen, and dark bristles confined to median area above fang groove, superior margin of fan groove with two large teeth, inferior margin with three subequal teeth, labium, maxillae, and sternum same as in male; abdomen less than twice as long as wide, base truncate with same markings as in male, but median dark stripe extends beyond middle with two pairs of oblique gray lines from it on posterior half, each side has the usual golden and silver stripes, venter with pale band about middle, very dark above spinnerets; legs, pale with tibiae and metatarsi darker at tips and the usual scattered spines; epigynum wider than long with a dark chitinized area anteriorly extending to pedicel; median septum narrow at base with openings, a pair of large white circles directly below the basal fold.

Holotype ♂ Cuba; South side of Pico Turquino, 3,000–5,000 feet, June, 1936, (Darlington).

Allotype ♀ Cuba; South side of Pico Turquino, 3,000–5,000 feet, June, 1935, (Darlington).

Paratypes 2 ♂ 8 ♀ Cuba; South side of Pico Turquino, 3,000–5,000 feet, June, 1936, (Darlington).

Paratype ♀ Cuba; Sierra de Cobre, 3,000–3,800 feet, 3–7 July, 1936, (Darlington).

This species is very near *Leucauge aurostriata* (O. P. Cambr.) but differs in the following points: distinct spicules on posterior part of cephalothorax of both male and female; quadrangle of median eyes narrower in front as in *Leucauge venusta* (Walck.). It differs from the latter species by the spicules, and in the male palpus, by the membranous sheath; in the female, by the wider epigynum with the narrow septum and openings directly below the fold.

LEUCAUGE VENUSTA (Walckenaer)

Epeira venusta Walckenaer, 1837, 2, p. 90.

Epeira hortorum Hentz, 1847, p. 477, pl. 31, fig. 19.

Leucauge venusta, Petrunkevitch, 1930, p. 266, figs. 121, 122.

Probably because of its wide distribution from Maine to Panama, this species has received many names. It is not common in Cuba, and possibly has been wrongly identified by Franganillo, as he describes it with four basal angles on the abdomen, a character found only in *Leucauge regnyi*.

Genus MIMOGNATHA Banks 1929.

MIMOGNATHA FOXI (McCook)

Theridion foxi McCook, 1893, pl. 29, fig. 1.

Mysmena bulbifera Banks, 1896, p. 66.

Glenognatha bulbifera, Barrows, 1919, p. 210, figs. 1, 2.

Diplocephalus crumbi Petrunkevitch, 1925, p. 171, pl. 8, figs. 1, 2.

Mimognatha foxi, Banks, 1929, p. 90.

Male. Length, 1.2 mm., ceph. 0.5 mm., abd. 0.8 mm.

Cephalothorax brownish-yellow, head high, cephalic portion distinctly marked, no thoracic groove; eyes surrounded by black, anterior row recurved, a.m.e. separated by more than a radius and from a.l.e. by a diameter, posterior row straight, p.m.e. largest of the eight, separated by a radius, and from p.l.e. by a diameter, lateral eyes subequal and touching; quadrangle of median eyes slightly wider in front and higher than wide; clypeus a little less than height of quadrangle; mandibles vertical, divergent on distal half, fang groove long and oblique, superior margin with three sharp teeth, equidistant, inferior margin with four small teeth, fang long and evenly curved; labium wider than long, about two-thirds width of sternum; maxillae twice as long as labium and about half as wide as long, slightly inclined over labium; sternum triangular, slightly wider than long, widest between II coxae, truncate between IV coxae, flat with scattered black hairs; abdomen flesh-colored with scattered dark hairs and a silvery spot each side near the spinnerets; legs long and very slender, no spines but many short hairs, anterior pairs very long; palpus, femur more than half length of cephalothorax, tibia shorter than patella, only little longer than wide, paracymbium straight, very narrow, and only slightly swollen at tip which does not reach the middle of the bulb, bulb very large, globose, embolus and surrounding parts very small, cymbium much reduced in size.

Female. Length, 1.6 mm.

Very similar to male but the mandibles not quite as much swollen;

abdomen with the same silvery markings on dorsum; epigynum almost in the middle of the venter; area convex, and only the straight line of the fold can be seen.

♂ 5 ♀ Cuba; Soledad, 1-11 August 1934, (Darlington).

This spider is widely distributed from southern New England to Florida, but because of its small size, it is often overlooked. The male was figured by McCook but not described. Barrows described the mating and the round web in 1919. It is a smaller species than *Glenognatha minuta* Banks, the mandibles are not divergent from the base, and the three teeth on the superior margin of the fang groove are all sharp. Dr. Petrunkevitch describes as *Diplocephalus gloriæ* from Puerto Rico, a species which is probably a *Mimognatha*, but the description of the teeth on the mandibles and the quadrangle of median eyes shows that it cannot be *M. foxi*.

Genus PACHYGNATHA Sundevall 1823.

PACHYGNATHA AUTUMNALIS Keyserling

Pachygnatha autumnalis Keyserling, Verh. K. K. Zool. Bot. Gesell. Wien, 1883, **33**, p. 660, pl. 21, fig. 10; Emerton, 1884, p. 337, pl. 34, fig. 22, pl. 40, fig. 9.

The type in the Marx Collection is from Harrisburg, Pennsylvania. All the species of the genus are found in the temperate zone.

♀ Cuba; Soledad, 1-11 August, 1934, (Darlington).

Genus TETRAGNATHA Latreille 1804.

The genus *Tetragnatha* was established by Latreille in 1804, and in 1810 he definitely fixed *extensa* Linn. as the type. Species of the genus are found in all parts of the world, and many are widely distributed. According to Seeley, who in 1928 redescribed the species found in the United States, the genus *Eugnatha* Audouin is clearly a synonym and can not be used either as a genus or a subgenus. In 1881, Simon separated the species with a long post-abdomen as a genus name *Eucta*. *Tetragnatha caudata* Emerton was placed here, but according to Seeley, the genus does not differ from *Tetragnatha* except by the long post-abdomen. All Cuban species have been placed in *Tetragnatha* and only in the key have the divisions been indicated.

Long, slender spiders with very long legs and in the males, elongate mandibles.

Key for males

1. Abdomen extended beyond spinnerets *caudata*
Spinnerets terminal, or placed just under the tip of abdomen 2
2. Lateral eyes of each side farther apart than the median 3
Lateral eyes of each side not as far apart as the median 4
3. Dorsal spur pointed, mandibles about parallel, almost as long as cephalothorax, no "large tooth" on upper margin; tibia of palpus almost twice length of patella *pallescens*
Dorsal spur truncate, mandibles divergent, about one-half length of cephalothorax, "large tooth" distinct; tibia of palpus scarcely longer than patella *orizaba*
4. Legs without spines, patella of palpus longer than tibia, paracymbium very short, *tenuissima*
Legs with spines, 5
5. Dorsal spur at apex, "large tooth" missing, tibia of palpus one and a half times the patella, *seneca*
Dorsal spur not at apex, 6
6. Dorsal spur not bifid, but with cusp below, two large teeth at apex, so that it appears to be three large teeth; mandibles longer than cephalothorax, "large tooth" missing, tibia of palpus twice length of patella, *antillana*
Dorsal spur bifid, "large tooth" conspicuous 7
7. Two large teeth on apical side of "large tooth", one next, large broad, conspicuous; tibia of palpus twice length of patella; conductor at an angle to cymbium and dilate at tip *dentigera*
One tooth on apical side of "large tooth"; fang not evenly curved, conductor with a pointed tip, parallel and protected by cymbium *elongata*

TETRAGNATHA ANTILLANA Simon

Tetragnatha antillana Simon, 1897, p. 868; F.O.P. Cambridge, 1903, p. 433, pl. 41, figs. 5, 6; Petrunkevitch, 1930, p. 281, figs. 141-147.

Described from St. Vincent, this species has been found throughout Central and South America, in Puerto Rico, and Antigua.

♂ ♀ Cuba; Soledad, garden, July, August, 1931, (Banks and Worley).

♂ Cuba; Havana, (Cervera).

TETRAGNATHA CAUDATA Emerton

Tetragnatha caudata Emerton, 1884, p. 335, pl. 39, figs. 16, 22; Seeley, 1928, p. 107, pl. 1, figs. 5-10.

This is not a common species, but it has been found from Maine to Florida, always near water.

♀ Cuba; Soledad, garden, 11 August, 1931, (Worley).

TETRAGNATHA DENTIGERA F.O.P. Cambridge

Tetragnatha dentigera F.O.P. Cambridge, 1903, p. 431, pl. 40, fig. 14.

Male. Length, 6.5 mm.

Cephalothorax brown; eyes, anterior row recurved, a.m.e. largest, separated by less than a diameter, a.l.e. smallest, separated from a.m.e. by a diameter and a half, posterior row straight, and equidistant, p.m.e. slightly larger than p.l.e., lateral eyes separated by diameter of p.l.e. but tubercles connected; mandibles divergent, almost as long as cephalothorax, dorsal spur not at apex, long, with tip notched, superior margin of fang groove with "large tooth" conspicuous, two smaller teeth nearer origin of fang, the middle one very broad, heavy and conspicuous; "large tooth" followed by six graduated teeth, inferior margin with two heavy tooth connected at base near origin of fang, followed by eight very minute teeth, fang slightly sinuous; palpus, femur as long as mandible, tibia twice length of patella, paracymbium with a rounded tip and lobe lightly nearer tip than base, embolus and conductor long, latter dilate at tip, and ending with a curved hook at an angle from the cymbium.

♂ ♀ Cuba; Soledad, garden, August 1931, (Banks).

TETRAGNATHA ELONGATA Walckenaer

Tetragnatha elongata Walckenaer, 1805, p. 69.

Tetragnatha grallator Hentz, 1848, p. 26, pl. 4, figs. 1, 2; Seeley, 1928, p. 109, pl. 1, figs. 11-13, pl. 2, figs. 14-16.

A common species in the United States from the Atlantic to the Pacific. Petrunkevitch did not find it in Puerto Rico, and Franganillo has not recognized it.

♂ Cuba; Havana, (Cervera).

♂ ♀ Cuba; Soledad, garden, August, 1931, (Worley)

♀ Cuba; South side Pico Turquino, June, 1936, (Darlington).

♀ Cuba; Sierra de Cobre, 3,000-3,800 feet, July, 1936, (Darlington).

TETRAGNATHA ORIZABA (Banks)

Figure 135

Eugnatha orizaba Banks, 1898, p. 248, pl. 15, fig. 16.

Tetragnatha orizaba, Seeley, 1928, p. 130, pl. 3, figs. 36-39.

Originally found in Mexico, this species has since been reported in Florida and Cuba.

♂ ♀ Cuba; Soledad, garden; Vilches Hill, July, August, 1931, (Worley).

TETRAGNATHA PALLESCENS F.O.P. Cambridge

Tetragnatha pallescens F.O.P. Cambridge, 1905, p. 436; Petrunkevitch, 1930, p. 274, figs. 131-137.

Tetragnatha pallida Banks, 1892, p. 51, pl. 5, fig. 88. (*pallida* preoccupied by O. P. Cambridge, 1889).

A species with a very wide distribution but not common anywhere in the United States. Petrunkevitch found it abundant in Puerto Rico. Franganillo reports it from the Oriente.

♂ ♀ Cuba; Havana, (Cervera).

♂ ♀ Cuba; Soledad, garden, July, August, 1931, (Worley).

TETRAGNATHA SENECA Seeley

Tetragnatha seneca Seeley, 1928, p. 134, pl. 4, figs. 44-48.

Male. Length, 5.0 mm., ceph. 2.2 mm., mand. 2.0 mm.

Cephalothorax reddish-brown; eyes, anterior row recurved, a.m.e. separated by a diameter and from a.l.e. by at least two diameters, a.l.e. smallest of the eight, posterior row slightly recurved, subequal and equidistant, lateral eyes almost touching; mandibles not quite as long as cephalothorax, slightly divergent, dorsal spur nearly over origin of fang, not bifid, superior margin of fang groove with two large teeth near base of fang, "large tooth" missing, followed by a series of four or five graduated teeth, inferior margin with large tooth beneath fang, followed by a group of four teeth and then two much smaller, fang only slightly sinuate but bent near the tip; legs with few spines; palpus, femur little more than half the length of mandibles; tibia one and a half length of patella, paracymbium ending in an attenuate point, lobe very distinct just below the middle, conductor extends beyond the cymbium with an abrupt turn near tip, embolus straight and does not reach the apex of the conductor.

♂ Cuba; Havana, (Cervera).

♂ ♀ Cuba; Ciénaga de Zapata, Central Covadonga, 16 September, 1936, (Davenport).

♂ ♀ Cuba; Soledad.

This species is widely distributed from New England to Florida but it is not abundant anywhere. It is separated from *T. extensa* by the position of the dorsal spur, lack of "large tooth" on the fang groove, and the lateral eyes closer together.

TETRAGNATHA TENUISSIMA O.P. Cambridge

Figure 134

Tetragnatha tenuissima O.P. Cambridge, 1889, p. 8, pl. 1, figs. 12, 13; *ibid.*, 1903, **2**, p. 432, pl. 40, figs. 16, 17; Petrunkevitch, 1930, **30**, p. 279, figs. 138-140.

This species was described from Tabasco in Mexico. It has been recorded from Guatemala, Costa Rica, Panama, and Puerto Rico. The male is easily identified as the patella of the palpus is longer than the tibia, and the paracymbium is very short, not covering the bulb. The legs are spineless. Franganillo found it at Camaguey and Baracoa.

♂ ♀ Cuba; Soledad, Trinidad Mountains, March 1925, (Salt and Myers).

♂ ♀ Cuba; Soledad, Vilches Hill, July 1931, (Worley).

♂ Cuba; Ciénaga de Zapata, Central Covadonga, 16 September, 1936, (Davenport).

♀ Cuba; Havana, (Cervera).

Sub-family THERIDIOSOMATINAE

Genus THERIDIOSOMA O.P. Cambridge 1878

THERIDIOSOMA ARGENTEO-LUNULATUM Simon

Figures 131, 132

Theridiosoma argenteo-lunulatum Simon, 1896, p. 484, pl. 13, figs. 9-11.

Female. Length, 2.5 mm.

Cephalothorax brown, cephalic portion dusky-black, with a wide dusky marginal band on thoracic portion, head high; eyes, anterior row straight or slightly recurved, subequal, a.m.e. diurnal and almost touching, separated from a.l.e. by a radius, posterior row straight, so

that lateral eyes are touching, p.m.e. angular, largest of the eight, separated by a line, and from p.l.e. by a radius; quadrangle of median eyes higher than wide; clypeus about equal to diameter of a.m.e. and retreating; mandibles swollen at base, vertical, superior margin of fang groove with three teeth, inferior with one tooth; sternum convex, pale brown with numerous stiff hairs, widest between II coxae and truncate at tip, so that IV coxae are separated by a diameter; abdomen globose, grayish-black with a broad crescent-shaped, silver band on dorsum, venter grayish; legs, 4-1-2-3, pale brown, posterior pairs with traces of dark bands, rather short, anterior pairs heavier than posterior, with prolateral row of bristles on metatarsus, no spines; epigynum much wider than long and protruding from the abdomen.

Male. Length, 1.4 mm.

Cephalothorax brownish-yellow, cephalic portion very high, thoracic portion excavate and covered by the abdomen; eyes anterior row slightly recurved, subequal and equidistant, a.m.e. diurnal and almost touching, posterior row straight; p.m.e. largest of the eight, angular, almost touching, separated from p.l.e. by less than a diameter, p.l.e. smaller than a.l.e. and touching; quadrangle of median eyes narrower in front and wider than high; clypeus as high as quadrangle, convex; mandibles vertical, cone-shaped, without a boss, fang groove short, superior margin with three teeth, fang small; labium fused to sternum, lateral margins dark, convex, more than two-thirds as wide as long, IV coxae separated by more than a diameter; abdomen globose, base very high and extending over cephalothorax, grayish with a broad crescent-shaped, pale, basal band, and pale lateral stripes, venter dark, with darker concentric rings about spinnerets broken on sides by the pale lateral stripes; legs, 1-2-4-3, anterior pairs heaviest, darker at tips, no spines, tibiae and metatarsi with prolateral row of bristles, posterior pairs much shorter, no spines or long bristles on tibiae; palpus not as long as cephalothorax, terminal joint large and very similar to others in the genus.

Allotype ♂ Cuba; Pico Turquino, 1,500-3,600 feet, 11 July, 1936, (Darlington).

♀ Cuba; Pinar del Rio, San Vicente, July, (Archer).

The type, a female, was described from St. Vincent. The male differs from the female in the much higher clypeus and the longer and more slender anterior legs. The epigynum is quite distinct from the figure of *Theridiosoma nechodomae* Petrunkevitch from Puerto Rico. The male palpi of all members of the genus are very similar.

Genus WENDILGARDA Keyserling 1886.

WENDILGARDA THERIDIONINA Simon

Wendilgarda theridionina Simon, Hist. Nat. Araignées, 1895, 1, p. 919, fig. 986;
Petrunkevitch, 1930, p. 297, figs. 162-167.

This species was described from Venezuela, and Simon later reported it from St. Vincent. Petrunkevitch found it abundant in the Luquillo Mountains of Puerto Rico; he gives a detailed description and figures of both male and female. At Soledad it was collected in the dead leaves of the lily pond in the garden.

♂ ♀ Cuba; Soledad, garden, August 1931, (Banks and Worley).

Sub-family GASTERACANTHINAE

Genus GASTERACANTHA Sundevall 1833

GASTERACANTHA CANCRIFORMIS (Linn.)

Aranea cancriformis Linnaeus, Syst. Nat., 2, 1767, ed. 11, p. 1037.

Gasteracantha cancriformis, Petrunkevitch, 1930, p. 249, figs. 103-103d.

This is the most common *Gasteracantha* in the West Indies. It is found in the southern part of the United States and south to Paraguay. It is very abundant in all parts of Cuba, but because the male is so very small, it is not often seen in collections. Mr. Banks swept one in the garden at Soledad. Franganillo has described three varieties, all from females, and apparently based on color.

Genus MICRATHENA Sundevall 1833

Four species of *Micrathena* have been seen from Cuba. Franganillo has identified several more, among them two that are common to the United States and Mexico. The genus is confined to the New World, and has a large number of species in Central America and the northern part of South America. Most species are known only from females. These are easily separated by the number, size, and position of the spines on the abdomen. The males are very much smaller, and the abdominal spines are much reduced in size or are entirely lacking. Males of the four species have been seen as well as a fifth male from the eastern part of the island, probably a species not yet recognized from Cuba.

Females

1. Abdomen with many short spines; above spinnerets higher than wide, *mammillata*
 Abdomen with the usual number of spines; above spinnerets not as high as wide, 2
2. Abdomen with no anterior spines; posterior spines divergent and evenly reduced. *militaris*
 Abdomen with anterior spines 3
3. Anterior spines almost parallel, directed anteriorly; posterior pair very short. *cubana*
 Anterior spines directed outward; posterior pair only slightly divergent, long, with hairy, swollen tips *forcipata*

Males

1. Abdomen more than three times as long as wide, tip broadly truncate and hairy, *mammillata*
 Abdomen less than three times as long as wide 2
2. Abdomen as long as wide at posterior margin, base one-third width of posterior margin. *cubana*
 Abdomen longer than wide 3
3. Abdomen more than twice as long as wide, rectangular. *spec.*
 Abdomen about twice as long as wide 4
4. Abdomen as wide at base as at posterior margin. *forcipata*
 Abdomen less than half as wide at base as at posterior margin. *militaris*

MICRATHENA species

Figure 139, 143

Male. Length, 4.1 mm., ceph. 1.5 mm., abd. 2.6 mm.

Cephalothorax chestnut-brown, smooth, two-thirds as wide as long, (8 : 12), anterior margin nearly two-thirds greatest width, (5 : 8), widest between III pair of legs, thoracic depression round, opposite II coxae a pair of widely separated lateral pits the same size as median, posterior margin less than anterior; eyes in three groups, a.m.e. carried forward, separated by about a diameter; quadrangle of median eyes slightly wider in front; clypeus as high as quadrangle; sternum dark

brown, roughened, carried between posterior coxae so that it is emarginate between III coxae, IV coxae almost touching; abdomen rectangular, base but little narrower than tip, both truncate, sides parallel, a broad dark brown median stripe from base to tip with lateral margins indented by two pairs of pale spots, one near base and the other beyond middle, a median triangular pale spot just behind middle touching posteriorly the elongated posterior muscle spots, venter dark, spinnerets one-third distant from tip; legs, femora dark, other joints paler, anterior femora iridescent and granular, spines only on I femur, lateral, 1 near tip, dorsal, 1 at tip; palpus short but terminal joint large, patella, 1 long spine, tibia widened at tip, tarsal hook large with lower lobe very small, palpal organ of the same type as *M. cubana* but the embolus much shorter and stout, supported by a thin white sheath, beneath is a pointed piece, seen from side it is broad and flattened, beneath is an upward-turned hook.

♂ Cuba; Oriente, Los Llanos, 1,000-2,000 feet, 16-20 July, 1936, (Darlington).

MICRATHENA CUBANA (Banks)

Figures 137, 138, 144, 152, 153

Acrosoma cubana Banks, 1909, p. 163, pl. 45, fig. 2.

Female. Length, 6.0 mm., abd. 4.5 mm. long, 6.0 mm. wide between posterior spines.

Cephalothorax chestnut-brown, a deep circular depression marks the thoracic groove, three pairs of lateral depressions between lateral margins and median line, sternum heart-shaped, not indented in front of coxae; abdomen yellow with a large median black spot widest at base, sides dark with two rows of yellow spots from posterior spines to spinnerets, spines, anterior pair small, on extreme margin, directed forward over cephalothorax and almost parallel, no dorsal spines, posterior pair black, sharp and divergent, beneath, a small pair directed downward, slightly larger than anterior pair; legs, red-brown, anterior femora with two rows of ventral cusps, posterior femora, cusps confined to distal half; epigynum as figured.

Male. Length, 5.0 mm., ceph. 2.2 mm., abd 2.6 mm.

Cephalothorax dark brown, with a faint pale stripe from p.l.e., narrowing to less than half the width at posterior margin, granulate, little over half as wide as long, greatest width between II and III coxae, narrowing to almost half the greatest width at lateral eyes, low and flat,

a deep circular depression for thoracic groove, four pairs of elongate depressions between lateral margins and median line; eyes in three widely separated groups, median eyes carried forward on a lobe, a.m.e. largest of the eight, separated by less than a diameter, p.m.e. smaller, separated by a radius; quadrangle of median eyes wider in front and as wide as high; sternum deeply excavate between III pair of coxae, a space between III and IV coxae, IV coxae touching; abdomen dark chestnut-brown, mottled, a pair of round pale spots on posterior third, separated by a diameter, posterior margin almost equal to length, anterior margin equals one-third posterior, anterior pair of spines reduced to obtuse points connected by a chitinous ridge, posterior margin with two pairs of small blunt spines, one above the other as in the female, conspicuous chitinous ring surrounding spinnerets; legs spineless, except for a strong dorsal spine on I and II femora at tip, no spines on II patella, all femora with two rows of cusps, I coxa without a hook; palpus, tarsal hook bifid, upper portion in a long and curved lobe with a rounded tip, lower portion much flattened with a very broad tip which rolls upward, cymbium not covering organ, embolus very long and slender, supported by a white sheath from base to tip, below tip are two black points.

Holotype ♀ Cuba; San Diego de las Baños, Banks Coll.

Allotype ♂ Cuba; Soledad, 1-11 August, 1934, (Darlington).

It is not impossible that *Micrathena sagittata* (Walck.) has been confused with *M. cubana*. The former has the anterior pair of spines not on the margin and they are directed upward rather than forward, the small spines beneath the posterior are lacking. Females of *M. cubana* have been found in all parts of Cuba; also three males, one from San Diego de los Baños, N. Banks Coll., one from the Sierra de Cobre, Loma del Gato, 2,000-3,325 feet, (Bruner) and the allotype.

MICRATHENA FORCIPATA (Thorell)

Figures 141, 146, 149, 151

Acrosoma forcipatum Thorell, 1859, **16**, p. 300.

Micrathena cylindracea Franganillo, 1930, p. 32; *ibid.* 1936, p. 96.

Female. Length, 8.0 mm., ceph. 2.2 mm., abd. 6.0 mm. long, 12.0 mm. wide between posterior spines.

Cephalothorax reddish-brown, smooth, cephalic portion higher than thoracic, thoracic depression semi-circular, no paired lateral depressions; quadrangle of median eyes as wide in front as behind, higher

than wide, p.m.e. largest of eight, separated by a little over a radius, a.m.e. separated by almost a diameter; abdomen brown covered with sigillae, largest yellow spot on middle, and a pair of yellow spots anterior to dorsal spines, anterior pair yellow, very small and directed outward; dorsal pair brown, much longer, very sharp and directed upward and slightly outward, posterior pair brown, almost as long as abdomen, divergent, distal third swollen, covered with fine hairs and ending in a sharp spine, beneath posterior pair are very small sharp spines which do not show in dorsal view, venter brown with yellow spots and small sigillae, spinnerets surrounded by a chitinous ring; legs red-brown, spineless, femora with two rows of ventral cusps; epigynum deep red-brown, triangular area with oval openings near fold, separated by more than long diameter, and a small recurved finger at apex of triangle.

Male. Length, 3.5 mm., ceph. 1.6 mm., abd. 2.0 mm. long, 1.0 mm. wide.

Cephalothorax brown, smooth and shining, five-sixths as wide as long, low and rather flat, anterior margin less than half the greatest width, thoracic depression circular, about opposite III coxae, no lateral depressions; eyes in three groups, median eyes carried forward, p.m.e. separated by a diameter, quadrangle same width in front as behind and higher than wide, lateral eyes touching and on a low tubercle; sternum dark brown, only slightly notched between III coxae; abdomen almost rectangular, anterior margin straight, posterior margin rounded, dorsum flattened, no higher at posterior than at anterior end, no indications of spines, is dark brown, with narrow white basal band which is broken in two pairs of spots on sides, on anterior half is a pair of white spots followed by a single spot and a pair of white spots, venter dark, spinnerets surrounded by a distinct chitinous ring; legs granular and iridescent, no hook on I coxae, no spines on anterior femora, IV femur, 2 long dorsal spines near base, patellae I, III and IV spineless, I tibia, ventral, 6-3 spines, lateral, 2 near base, so there appears to be three rows of spines, all short, metatarsus, 0, II pair, patella, lateral, 1, distal, 1, both movable, tibia, ventral, 6-3, lateral, 0, metatarsus, dorsal, 2, ventral, 0; palpus, short, terminal joint large, femur, patella and tibia white, tibia widened at distal end but no lobe; tarsal lobe thin and chitinized as figured, embolus probably a dark short spine recurved, above a much smaller dark spur.

Allotype ♂ Cuba; Sierra de Cobre, Loma del Gato, 2,600-3,325 feet, (Bruner).

Thorell described *Micrathena forcipata* from Cuba and says, "longi-

tudine fere corporis, crassis medio angustatis, oblique sub-clavatis, apice mucronatis." Reimoser, in his monograph on *Micrathena*, 1917, places it as a synonym of *M. sexpunctata* (Hahn) from Brazil. This latter species is figured with the posterior pair of spines only slightly divergent, not swollen at the tip, and the anterior pair not on the extreme anterior margin, but subequal with the dorsal pair. Reimoser's figure of the epigynum is quite different from the specimens from Cuba.

It is with some hesitation that I synonymize *Micrathena cylindracea* Frang., since the length is given as 3.2 mm., and in the original description, it is compared with *M. vigorsi* Perty, which has the posterior pair of spines long and sharp; however, Franganillo mentions the enlarged and hairy tip. In the second description, it is compared with *M. flavomaculata* Keys. from Haiti. This species has the posterior pair of spines swollen and hairy.

The females of *Micrathena forcipata* occur in all parts of Cuba. Two males have been seen; the allotype from Loma del Gato, between 2,606 and 3,500 feet elevation was collected by S. C. Bruner, and the other from Buenos Aires, Trinidad Mountains, between 2,500 and 3,500 feet, was collected 9 May, 1936 by Dr. Darlington.

MICRATHENA MAMMILLATA (Butler)

Figures 142, 147, 155

Acrosoma mammillata Butler, 1873, p. 427.

Micrathena mammillata, F.O.P. Cambridge, 1904, p. 529, pl. 50, fig. 4.

Female. Length, 8.0 mm., abd. 6.5 mm. high above spinnerets.

This species belongs to the section of the genus with the abdomen above the spinnerets higher than the greatest width of the abdomen. The type of *Micrathena mammillata* came from Santarem, Brazil. F. O. P. Cambridge redescribed and figured it in the Biol. Centr. Amer. The figures show twenty pairs of spines or tubercles, three lateral pairs beneath the anterior pairs. In 1872, Taczanowski described *Micrathena horrida* from Cayenne, French Guiana, and in 1910, Petrunkevitch in the Ann. N. Y. Acad., 19, p. 212, pl. 21, figs. 9-11, wrote a new description from an adult female from Sao Paulo, Brazil. He does not mention, nor do his figures show, any lateral spines beneath the anterior pairs; also his figures of the epigynum fail to show any openings. Reimoser, in his revision of the genus in 1917, places *M. mammillata* Butler

as a synonym of *M. horrida*. Until males have been seen from near the type localities, it is hardly safe to do so. F. O. P. Cambridge suggests that *M. longicauda* Cambr. may be the male of *M. mammillata*. If that is the case, the Cuban species is undescribed because the tip of the male abdomen shows no cusps, the tibia of the palpus has a distinct lobe, and the tarsal lobe is of another shape. The epigynum of the Cuban specimens is very similar to the figure of those from Central America. The recurved finger of the epigynum starts from near the fold, and the openings are widely separated.

The female of *M. mammillata* is easily separated from *M. gracilis* (Walck.), (*rugosa* Hentz), by the number of dorsal spines, and the large tubercle immediately above the spinnerets.

Male. Length, 4.6 mm., ceph. 1.1 mm., abd. 3.6 mm. long, 0.8 mm. wide.

Cephalothorax pale brown, shaded with gray and thickly covered with small pits, thoracic depression at posterior third, cephalic portion slightly narrowed but no higher than thoracic; eyes, p.m.e. heavily ringed with black, largest of the eight, separated by less than a diameter, lateral eyes subequal on a low tubercle, quadrangle of median eyes higher than wide and slightly wider in front; sternum gray, triangular, distinctly notched between III coxae and slightly between II coxae, IV coxae separated by half a diameter, and sternum continued between, abdomen pale brown, more than a three times longer than wide, dorsum flat and covered with pale pits, anterior muscles spots dark brown, small and close together, posterior pair much larger, separated by two diameters, tip truncate, lateral margins of posterior third notched twice, as if by atrophied spines, venter covered with pits, spinnerets one third distant from pedicel, surrounded with a heavy corneous ring; legs, pale, short, and spineless except for a minute spine at end of anterior patellae; III pair directed forward, no hook on I coxae; palpus very short, patella with one long bristle, tibia with a distinct lobe beneath tarsal hook, tarsal hook slightly bilobed with a recurved tip, heavily chitinized, embolus very long and slender, and slightly curved with a parallel black piece not quite as long.

♂ ♀ Cuba; Oriente, Los Llanos, 1,000-2,000 feet, 16-20 July, 1936, (Darlington).

♀ Cuba; Pico Turquino, 1,000 feet, 25 June, 1936, (Darlington).

♀ Cuba; Pico Turquino, 1 August, 1935, (Acuña).

♀ Cuba; Oriente, Cuchillo de Guajimero, 2,000 feet, 22 July, 1936, (Darlington).

MICRATHENA MILITARIS (Fabricius)

Figures 140, 145, 154

Aranca militaris Fabricius, 1775, p. 434.*Aranca armata* Oliver, Encyl. Meth., 1791, 4, p. 205.*Micrathena armata*, Simon, Hist. Nat., Araignées, 1895, 1, p. 853, fig. 910.*Micrathena militaris*, Petrunkevitch, 1928, p. 53, figs. 12-15; *ibid.*, 1930, p. 257, fig. 108.

Male. Length, 3.2 mm., abd. 1.7 mm.

Cephalothorax brown, three-quarters as wide as long, thoracic depression a circular pit, three pairs of lateral pits faintly marked; eyes in three groups, a.m.e. carried forward, separated by less than a diameter; sternum dark brown, triangular, III pair of legs directed forward and sternum extending between III and IV coxae, IV coxae almost touching; abdomen brown, about twice as long as wide, widest at posterior end where two pairs of spines can be traced, base less than half the greatest width, posterior portion high above spinnerets, venter mottled brown with a pair of irregular lateral stripes, fold slightly nearer pedicel than to spinnerets, legs, femora of anterior pairs dark brown, tibiae with prolateral dark stripe, posterior pairs pale with retrolateral dark stripe from femora to tarsi, all femora with two rows of ventral cusps; palpus, tibia with ventral process, tarsal hook leaf-like, bilobed, upper lobe with a long recurved tip, cymbium does not cover palpal organ, embolus very long, slender, and curved, protected by a semi-transparent sheath, end is hidden by a leaf-like process with spatulate tip so that tip can not be seen.

♂ Haiti.

♀ Cuba; Havana.

♀ Cuba; Soledad, 1927, (Creighton).

♀ Cuba; Sierra de Cobre, Loma del Gato, 2,600 feet, (Bruner).

♀ Cuba; South side Pico Turquino, 3,000-5,000 feet, June 1936, (Darlington).

According to Petrunkevitch, this species is found in Puerto Rico, St. Thomas and Surinam. In the museum collection there are three males and many females from Haiti. Petrunkevitch found in Puerto Rico a female with the embolus and the surrounding sheath in the epigynum. He figures this, showing the barb at the tip of the embolus.

Family MIMETIDAE

Genus MIMETUS Hentz 1832

MIMETUS HESPERUS Chamberlin

Mimetus hesperus Chamberlin, Pomona Coll. Journ. Ent. Zool., 1922, **15**, p. 5, figs. 2, 7, 8.

The type of this species is from southern California but it has been found in Texas and Arizona. It has probably been confused with *M. intersector* Hentz, but it is easily separated by the palpus and the epigynum.

♂ Cuba; Trinidad Mountains, Hanabanilla Falls, 30 April, 1936, (Darlington).

MIMETUS INTERSECTOR Hentz

Mimetus intersector Hentz, 1850, p. 32, pl. 4, figs. 12, 13; Emerton, 1882, p. 16, pl. 3, fig. 3.

A species found all over the United States. It has never been reported from Central America. Petrunkevitch describes a dark variety from Puerto Rico.

♂ ♀ Cuba; Soledad, February 1925, (Salt).

♂ ♀ Cuba; Soledad, August 1931, (Banks and Worley).

Family CTENIDAE

Sub-family CTENINAE

Genus CELAETECHEUS Simon 1897

CELAETECHEUS CABRIOLATUS Franganillo

Figures 157, 160

Celaetycheus cabriolatus Franganillo, 1930, p. 34, fig. 12; 1936, p. 106.

Male. Length, 9.0 mm., ceph. 4.8 mm., abd. 4.1 mm.

Cephalothorax light brown, cephalic portion paler and separated from the thoracic by dark lines, thoracic with a pale median stripe to posterior margin, sides evenly rounded, moderately high, thoracic groove long; eyes, a.m.e. one-third the diameter of p.m.e., separated by a diameter, a.l.e. small, oblique and with p.m.e. forming a recurved row by their upper margins, p.m.e. and p.l.e. subequal and equi-

distant, p.m.e. separated by a radius, p.l.e. on black tubercles directed backward; quadrangle of median eyes as long as wide and much narrowed in front; clypeus as high as diameter of a.m.e. and probably in life, because a few remain, there is a row of stout spines on margin; mandibles verticle, pale brown, with darker stripes, covered with short white hairs and longer dark bristles, fang groove oblique, superior margin with three small teeth close together and a scopula of long white hairs, inferior margin with four teeth; labium as long as wide, lateral margins on basal half excavate; maxillae pale, more then twice as long as labium, slightly inclined, outer margins parallel; sternum pale, nearly as wide as long, (6 : 7), with scattered bristles; IV coxae separated by less than half a diameter; abdomen pale reddish-brown, with dark lateral stripes which end about the middle and are continued as spots, entire abdomen covered with short white and longer dark hairs, venter pale with irregular dark spots; legs, 4-1-2-3, pale, posterior tibiae and metatarsi darker, no scopula on tarsi; spines, I and II pairs, patella, 1-1, tibia, ventral, 2-2-2-2-2, lateral, 2-2, dorsal, 2, metatarsus, ventral, 2-2-2, lateral, 3, dorsal, 0, ventral spines on III and IV pairs very long and numerous; palpus about as long as cephalothorax, and seen from above, the patella and tibia are of equal length, tibia on prolateral side with a thick mass of short spines, tibial apophysis a black triangle almost at right angles to joint with a mass of white hairs below, cymbium, on prolateral margin, has a lobe which is parallel to tibial apophysis, palpus very similar to *Ctenus* with a large dark central lobe protruding from the plane.

Female. Length, 9.0 mm., ceph. 4.1 mm., abd. 4.5 mm.

Cephalothorax and eyes same as in male; spines on margin of clypeus missing; mandibles brown, geniculate at base, teeth on fang groove same as in male; abdomen has been injured so markings can not be seen; legs, 4-1-2-3, much shorter than in male; spines, I and II pairs, patella, 0, tibia, ventral, 2-2-2-2-2, lateral, 0, dorsal, 0, metatarsus, ventral, 2-2-2, lateral, 0, dorsal, 0; spines numerous and long on posterior tibiae and metatarsi; epigynum, wider than long, of the usual *Ctenoid* type, showing no detail but a small chitinized point each side near the fold.

Allotype ♂ Cuba; Trinidad Mountains, Buenos Aires, 2,500-3,500 feet, 8-14 May, 1936, (Darlington).

♂ ♀ Cuba; Trinidad Mountains, Buenos Aires, 2,500-3,500 feet, 8-14 May, 1936, (Darlington).

♀ Cuba; Pico Turquino, 6,000 feet, 16-17 June, 1936, (Darlington).

Franganillo has described two species and a variety of *Celactycheus*,

all based on females. It is very doubtful if they belong to this genus as defined by Simon, since *C. cabriolatus* differs in the two characters that separate the genus from *Ctenus*; four instead of five teeth on the lower margin of the fang groove, and eyes of the posterior row equal, rather than p.m.e. larger than p.l.e. The number of spines on the anterior tibiae and metatarsi vary in the male and female as in *Ctenus*.

Genus CTENUS Walckenaer 1805.

CTENUS BREVITARSUS spec. nov.

Figures 159, 164

Male. Length, 11.0 mm., ceph. 6.5 mm., abd. 5.0 mm.

Cephalothorax chestnut-brown, pale V-shaped mark from p.l.e. to thoracic groove, sides covered with short white hairs, dense mass of white hairs behind posterior eye row; cephalic portion rises gently to thoracic groove where it is quite high and then falls abruptly to posterior margin, a thick mass of white hairs directly behind groove; eyes, a.m.e. about one-half diameter of p.m.e., separated by more than a radius, eyes of posterior row subequal and equidistant; p.m.e. separated by more than a radius, a.l.e. about one-half the size of a.m.e.; quadrangle of median eyes much narrower in front and as high as wide; clypeus a little more than diameter of a.m.e.; mandibles vertical, not swollen at base, with long colorless hairs, superior margin of fang groove with three teeth, middle one largest, scopula of very long hairs, inferior margin with five teeth, the last tooth very small; labium longer than wide, slightly excavate near base; maxillae more than twice as long as labium, twice as long as wide, sides almost parallel, tips convex, palpi inserted on basal third; sternum deep yellow, sparsely covered with bristles, two-thirds as wide as long, obtusely pointed at tip, IV coxae sub-contiguous; abdomen brown, covered with short hairs and longer dark bristles, a basal triangle of white hairs which gradually fades about the middle, posterior half with four pairs of poorly defined black spots, venter pale brown; legs, 4-1-2-3, pale brown with short white hairs, and short black hairs forming interrupted rings on femora, all tarsi less than half the length of metatarsi; spines, I and II tibia, ventral, 2-2-2-2-2, lateral, 2, dorsal, 3, metatarsus, ventral, 2-2-2, lateral, 3, dorsal, 0; palpus, femur with a transverse row of four spines near tip and a median row of three spines, patella longer than tibia, tibia with a broad truncate black apophysis, and a deep excavation on

dorsal side in which a broad flattened lobe of the cymbium rests, on ventral side is a short rounded apophysis which extends on tibia, palpal organ very similar to typical forms with a white or semi-transparent lobe above the middle.

Female. Length, 15.5 mm., ceph. 8.0 mm., abd. 8.0 mm.

Cephalothorax much redder than in the male, with a broad median pale stripe with converging margins which disappears at the thoracic groove, sides with short white hairs, a few white hairs about eyes, and a mass of white hairs posterior to thoracic groove, cephalic portion almost level from posterior eyes to groove when it slopes abruptly to posterior margin; eyes, a.m.e. about one-half diameter of p.m.e., separated by a diameter, posterior row, subequal, p.m.e. separated by a diameter, and from p.l.e. by a diameter and a half, a.l.e. nearer to p.l.e. than to p.m.e., anterior margin of a.l.e. and posterior margin of p.m.e. form a straight line; quadrangle of median eyes narrower in front and as high as wide; clypeus more than diameter of a.m.e.; mandibles dark brown, covered with long dark hairs, swollen at base, inferior margin with five unequal teeth, superior margin with three teeth, dense scopula of long hairs on upper margin; labrium brown, longer than wide, and deeply excavate on sides at base; maxillae more than twice as long as labium, wider at distal half so that outer margin is convex; sternum pale brown, flat, two-thirds as wide as long, obtusely pointed at tip, IV coxae almost touching; abdomen brown, covered with short black and white hairs, median pale stripe narrow at base and disappearing about the middle, posterior half with four pairs of dark spots, venter pale brown with scattered long hairs; legs, 4-1-2-3, brown, with short black and white hairs which form white rings on femora and tibiae, more conspicuous when dry, faint scopula on anterior tarsi and metatarsi, spines, I and II tibia, ventral, 2-2-2-2-2, lateral, 0, dorsal, 0, metatarsus, 2-2-2, lateral, 0, dorsal, 0; epigynum convex, broader than long with the lateral ridges very conspicuous.

Holotype ♂ Cuba; Guantanamo, 10 March, 1913, (Ramsden).

Allotype ♀ Cuba; Guantanamo, 10 March, 1913, (Ramsden).

Paratype ♀ Cuba; Guantanamo, 10 March, 1913, (Ramsden).

Paratype ♂ Cuba; Guantanamo, 12 April, 1913, (Ramsden).

Paratype ♀ Cuba; Soledad, February 1925, (Salt).

Paratype ♂ ♀ Cuba; Soledad, 12 August, 1931, (Worley).

Paratype ♂ Cuba; Trinidad Mountains, Mina Carlota, 19-25 March, 1925, (Salt and Myers).

Paratype ♀ Cuba; Trinidad Mountains, Mina Carlota, 8-14 May, 1936, (Darlington).

Paratype ♂ Cuba; Coast below Pico Turquino, June 1936, (Darlington).

When dry the abdomen is covered with a thick mass of yellowish-white hairs, so that the paired dark spots are not very distinct. The legs are also covered with whitish hairs. The female is redder than the male but differs from the male only in the characteristic points, no lateral or dorsal spines on the anterior tibiae, higher clypeus, slight differences in the eyes and the almost level cephalothorax. The epigynum is characteristic of the genus and differs from *Ctenus vernalis*, also from Soledad by the greater width and the heavier lateral pieces. The male differs from *C. vernalis* by the greater height of the cephalothorax and in the palpus by the shorter tibia; the lobe is much larger on the cymbium.

CTENUS COXANUS spec. nov.

Figure 162

Male. Length, 10.0 mm., ceph. 5.5 mm., abd. 4.0 mm.

Cephalothorax bright chestnut-brown, a very faint median stripe from p.l.e. converging at posterior margin, anterior portion with fine white hairs, cephalic portion rising gradually to about the middle of the thoracic groove, when it falls abruptly to posterior margin; eyes, a.m.e. less than a radius apart, about one-half diameter of p.m.e., eyes of posterior row subequal, p.m.e. separated by less than a diameter and from p.l.e. by about a diameter and a half, p.l.e. on tubercles so that eyes are directed backward, second row straight, (center of p.m.e. on a straight line with center of a.l.e.); quadrangle of median eyes much narrower in front and higher than wide; clypeus about diameter of a.m.e.; mandibles vertical, with many white hairs, superior margin of fang groove with three teeth, inferior margin with five graduated teeth, scopula of long hairs on upper margin; labium longer than wide, lateral margins on basal half excavate; maxillae more than two and a half times as long as labium, sides parallel, tips not widened, palpi inserted about the middle; sternum yellow, three-quarters as wide as long, obtusely pointed at tip, IV coxae almost touching, coxae I, II and III covered with short, stiff spicules directed backward, each bearing a short bristle or hair, these less conspicuous on IV coxae; abdomen brownish-gray, covered with soft colorless hairs and stiff dark bristles, basal half with ill-defined median stripe, three pairs of dark spots on

posterior half, venter dull yellow with irregular dark spots; legs about the color of cephalothorax, all femora darker, length,

	femur	pat. + tib.	metat.	tarsus	total
I	4.5 mm.	7.0 mm.	4.5 mm.	2.0 mm.	18.0 mm.
II	4.0 mm.	5.5 mm.	3.5 mm.	1.8 mm.	14.8 mm.
III	3.0 mm.	4.2 mm.	3.0 mm.	1.5 mm.	11.7 mm.
IV	5.0 mm.	7.0 mm.	5.0 mm.	?	? 19.0 mm.

spines, all femora with long spines in three transverse rows, I and II pairs, patella, prolateral, 1, tibia, ventral, 2-2-2-2, middle pairs long, lateral, 3, dorsal, 3, metatarsus, ventral, 2-2-2, lateral, 3, dorsal, 0, spines on III and IV pairs very long; palpus, femur with 4 spines in a transverse row near apex and 2 median spines, tibia and patella of about equal length, tibia with 2 long lateral spines, and a large spreading black apophysis with a black swelling or knob beneath the palpal organ, parts of the palpus very black, a large dark area with a slender white lobe between it and the embolus.

Holotype ♂ Cuba; Pan de Azucar, Matanzas, 1913, (Barbour and Shaw).

This species differs from others in the great number of spicules on the coxae, and the short tibia of the palpus. The palpal organ is very similar to the figure of *Ctenus calcaratus* Cambridge, Biol. Centr. Amer., 1900, 2, p. 113, pl. 8, fig. 7, but the tibial apophysis of the latter is much more slender; no mention is made of the spicules or bristles on the coxae, or the relative length of the tibia and patella of the palpus.

CTENUS ISOLATUS spec. nov.

Figure 163

Female. Length, 18.0 mm., ceph. 9.0 mm., abd. 9.5 mm.

Cephalothorax deep red-brown with a paler median stripe from the posterior eye row to margin, soft white hairs over median stripe and a few white hairs about lateral margins, patch of white hairs behind p.l.e. continuing to clypeus; eyes, a.m.e. about one-half diameter of p.m.e., separated by a diameter, a.l.e. about one half the diameter of a.m.e. and midway between p.l.e. and p.m.e., posterior eyes subequal; p.m.e. separated by a scant diameter, and from p.l.e. by a diameter and a half, anterior margins of a.l.e. and p.m.e. form a slightly re-curved line; quadrangle of median eyes narrower in front and wider than high; clypeus about equal to diameter of a.m.e.; mandibles dark brown, geniculate, superior margin of fang groove with three teeth

and many long hairs, inferior margin with five teeth; labium longer than wide, lateral margins at basal half excavate, rounded and slightly emarginate at tip; maxillae twice as long as labium, wider at distal half, outer margin convex; sternum flat, slightly pointed behind, sides emarginate, first coxae widely separated, fourth coxae touching; abdomen a faded brownish-gray with a wide median light stripe from base to spinnerets, posterior half with serrate margins, venter dull brown; legs, 4-1-2-3, a deep red-brown, no markings on anterior pairs but broken rings of white hairs on posterior femora, patellae, tibiae and metatarsi, spines, I and II pairs, tibia, ventral, 2-2-2-2-2, none overlapping, lateral, 0, dorsal, 0, metatarsus, 2-2-2, basal pair longest but not overlapping, lateral, 0, dorsal, 0, scopula quite heavy on metatarsi and tarsi; epigynum longer than wide, with conspicuous lateral margins and lateral chitinized points above the fold, middle area deeply depressed.

Holotype ♀ Cuba; Havana, (Barbour).

Paratypes 2 ♀ Cuba; Havana, (Cervera); Banks Coll.

CTENUS VERNALIS spec. nov.

Figures 150, 156, 158

Male. Length, 11.5 mm., ceph. 6.5 mm., abd. 6.0 mm.

Cephalothorax chestnut-brown with a median stripe from p.l.e. to posterior margin, sides veined with a dark brown, lateral margins with quite a wide border of soft white hairs, and a mass of white hairs behind p.l.e. which continues between eyes to margin of clypeus, cephalic portion rises gently to thoracic groove, then falls abruptly to the posterior margin; eyes, a.m.e. about half the diameter of p.m.e., separated by a radius, p.m.e. largest of the eight, separated by less than a diameter, and by about a diameter from p.l.e., a.l.e. about half a diameter of p.l.e. and midway between p.m.e. and p.l.e., seen from the front, the anterior margin of a.l.e. and p.m.e. form a straight line; quadrangle of median eyes much narrower in front and wider than high; clypeus less than diameter of a.m.e.; mandibles vertical, not geniculate, with two parallel dark lines and scattered long white hairs, superior margin of fang groove has a thick scopula so that teeth can not be seen, inferior margin has three large teeth followed by two much smaller; labium as long as wide, lateral margins at base excavate and tip slightly emarginate; maxillae more than twice as long as labium, tips not enlarged; sternum yellow, flat, oval, almost as wide as long, fourth coxae not quite touching, all coxae with a few spicules, most

numerous on second pair; abdomen with a wide median pale stripe that is more distinct on basal half, posterior half narrowed with irregular margins that suggest chevrons, sides gray, venter deep yellow with dark gray lines; legs, 4-1-2-3, pale brown with patches of dark hairs which form interrupted rings, spines, I and II pairs, tibia, ventral, 2-2-2-2-2, lateral, 3, dorsal, 3, metatarsus, ventral, 2-2-2, lateral, 2, dorsal, 0, scant scopula on tarsi and metatarsi; palpus, femur longer than patella plus tibia, with a transverse row of 4 spines near tip, and a median row of 4-6 spines, patella, 1 spine lateral, tibia and patella of equal length, tibia with 2 lateral and 1 dorsal spines, and a broad, short, black apophysis at tip, a prolateral brush of white hairs, cymbium extends over tip of tibia in a broad, flattened lobe with a sharp darkened margin, palpal organ characteristic of the genus with median dark piece not very large, and two white lobes above it.

Female. Length, 12.0 mm., ceph. 7.0 mm., abd. 6.0 mm.

Coloring same as in male, except that line of white hairs continues across the clypeus and half the length of the mandibles; eyes same as in male; clypeus less than diameter of a.m.e.; mandibles geniculate, superior margin of fang groove with three teeth, inferior with three large and two small teeth; maxillae slightly widened at distal half; labium and sternum same as in male; no spicules on coxae but there are long and short hairs; legs pale brown, the dark broken rings are more conspicuous on posterior femora, spines, long and scattered on femora, I and II pairs, tibia, ventral, 2-2-2-2-2, lateral, 0, dorsal, 0, metatarsus, ventral, 2-2-2, lateral, 0, dorsal, 0; epigynum broader than long as figured.

Holotype ♂ Cuba; Soledad, February, 1925, (Salt and Myers).

Allotype ♀ Cuba; Soledad, February, 1925, (Salt and Myers).

Paratype ♀ Cuba; Soledad, February, 1925, (Salt and Myers).

Paratype ♂ Cuba; Soledad, quarry, 13 August, 1931, (Worley).

Paratype ♀ Cuba; San Antonio de los Baños, 21 March, 1915, (Barbour and Brooks).

Genus CUPIENNIUS Simon 1891

CUPIENNIUS OBSCURUS spec. nov.

Figures 136, 161

Male. Length, 16.0 mm., ceph. 8.0 mm., abd. 9.0 mm.

Cephalothorax pale brown, clothed with fine, soft white pubescence, black about eyes, median pale stripe to thoracic groove very faint,

thoracic groove long and deep; eyes, a.m.e. separated by less than a diameter, more than half the diameter of p.m.e., eyes of posterior row subequal, p.m.e. separated by less than a diameter and from p.l.e. by a diameter and a half, a.l.e. less than a radius of a.m.e. and slightly nearer p.m.e. than to p.l.e., seen from front, posterior margin of a.l.e. and anterior margin of p.m.e. form a straight line; quadrangle of median eyes narrower in front and as high as wide; clypeus equals diameter of a.m.e.; mandibles reddish-brown, vertical, not geniculate, with long white hairs arranged to show black lines, superior margin of fang groove with three teeth, inferior margin with four subequal teeth; labium yellow, longer than wide, lateral margins at basal half deeply excavate; maxillae yellow, twice as long as labium, outer margins parallel, slightly enlarged at tip; sternum yellow, almost as wide as long, tip prolonged in a round knob in front of fourth coxae; abdomen pale brown with a spear-shaped mark, outlined in faded black, extending to middle of the abdomen, posterior half with faint cross bars and many long white hairs, venter pale brown with four converging lines of dark spots; legs, 2-4-1-3, I pair, 39.0 mm. long, II pair, 42.0 mm. long, III pair, 30.0 mm. long, IV pair, 40.0 mm. long, pale brown with all tarsi and metatarsi darker, femora without dark spots or bands, spines, I and II pairs, tibia, ventral, 2-2-2-2, lateral, 2-2, dorsal, 0, metatarsus, ventral, 2-2-2 and 1 at apex; palpus, tibia as long as femur, tibial spur small, slender, dark and truncate, in the palpus the central unca has a sharp hook at one corner, and a blunt point at the opposite corner.

Female. Length, 17.0 mm., ceph. 8.0 mm., abd. 9.2 mm.

Cephalothorax pale brown with a median dark stripe covered with a pubescence of dark hairs, sides covered with short white hairs, black about the eyes, several long white filaments between the eyes, thoracic groove long; eyes, a.m.e. separated by a diameter, little more than a radius of p.m.e., p.m.e. separated by less than a diameter, and from the slightly smaller p.l.e. by a diameter and a half, a.l.e. one half the diameter of a.m.e. and nearer p.m.e. than to p.l.e., seen from the front, posterior margin of a.l.e. and anterior margin of p.m.e. form a straight line; quadrangle of median eyes narrower in front and as wide as high; clypeus vertical, equals about two diameters of a.m.e.; mandibles dark brown, slightly geniculate and covered with long hairs and bristles, superior margin of fang groove with three teeth, inferior margin with four teeth; labium brown, slightly wider than long, lateral margins at base deeply excavate, tip straight; maxillae dark brown, almost twice as long as labium, widened at tip; sternum yellow, about as wide as

long, and widest between second coxae, tip extends in a narrow point between fourth coxae; abdomen dark brown with two pairs of irregular patches of white hairs, the first about one third from base and the second about one third from tip, a pair of lateral stripes of white hairs, very faint from base to first pair of white spots, posterior half of abdomen has many very long white hairs or bristles, venter dark brown, when dry, a broad median stripe of short red-brown hairs from fold to spinnerets is conspicuous; legs, 1-2-4-3, brown, metatarsi and tarsi much darker, posterior pairs darker than anterior, anterior tibiae and metatarsi covered with white hairs, spines, I and II pairs, tibia, ventral, 2-2-2-2, lateral, 2-2, dense scopula on all tarsi and metatarsi; epigynum about twice as long as wide, very much broader than figures of *Cupiennius sallei* (Keys.) or *C. foliatus* Camb.

Holotype ♂ Cuba; Soledad, February 1925, (Salt and Myers).

Allotype ♀ Cuba; Soledad, Belmonte, 10 September, 1930, (Dow).

Paratype ♀ Cuba; Soledad, 30 August, with egg sac.

Paratype ♀ Cuba; south side of Pico Turquino, 3,000-5,000 feet, June, 1936, (Darlington).

This species is undoubtedly near *Cupiennius foliatus* Cambr., but differs in the dark tarsi and metatarsi, and the pointed hook on the central unca in the male palpus. It may prove to be one of the six species that Franganillo has described in the genus *Ctenus*, but his descriptions are so brief and lacking in specific characters that they can not be recognized. In the Zoöl. Jahrb. Abth. Syst., 1910, **28**, p. 425, Strand described *Cupiennius cubae* from a female. He does not mention the number of teeth on the fang groove of the mandibles, but the number of spines on the anterior tibiae, and the description of the epigynum are characteristic of the genus *Ctenus* rather than *Cupiennius*.

CUPIENNIUS SALLEI (Keyserling)

Ctenus salei Keyserling, 1876, p. 685, pl. 8, fig. 53; Cambridge, Biol. Centr. Amer., 1901, **2**, p. 306, pl. 29, figs. 16, 17.

Keyserling described both sexes of this species from Mexico. F.O.P. Cambridge gives a detailed description, and figures both male and female in the Biologia. It has been found in Florida. Petrunkevitch did not find it in Puerto Rico. Males have been found at Soledad and Santiago de las Vegas.

Family GNAPHOSIDAE

Sub-family ANAGRAPHIDINAE

Genus PARATHEUMA gen. nov.

Cephalothorax moderately convex, anterior margin truncate, sides rounded, thoracic groove short but distinct; eyes cover half of head, anterior row slightly recurved, subequal, posterior row straight, p.m.e. nearer p.l.e. than to each other; clypeus narrow; labium as long as wide, lateral margins notched at base; mandibles swollen at base, divergent in female, superior margin of fang groove with three teeth, inferior margin with five or six minute teeth; maxillae almost twice as long as labium, very slightly inclined, slightly impressed in female, tips oblique, scopulate; spinnerets, inferior pair separated by a diameter or more, basal joint long, terminal joint short and conical, median pair as long as inferior, superior pair as widely separated as inferior, basal joint as long, terminal joint nearly as long as basal and pointed; colulus wanting; lobe of spiracle directly anterior to spinnerets; legs, coxae long, I pair of legs longest, anterior tibiae and metatarsi with small spines and few hairs, legs not scopulate.

Type *Paratheuma insulana* (Banks).

In 1928, Petrunkevitch placed all Drassids with long spinnerets together under the sub-family *Anagraphidinae*. *Paratheuma* differs from any described, in the curvature of the eye rows, number of teeth on the fang groove, and the lack of scopula on tarsi and metatarsi. In 1891, Keyserling established the genus *Radulphius* for two species from Brazil, which also have swollen mandibles, but the spinnerets are not described as separated, and the genus was placed near *Chiracanthium*.

PARATHEUMA INSULANA (Banks)

Figure 148

Eutichurus insulanus Banks, 1902, p. 270, fig. 3.

Female. Length, 4.5 mm., ceph. 2.0 mm., abd. 2.4 mm.

Cephalothorax moderately convex, more than three-quarters as wide as long, slightly narrowed in front of I coxae, sides rounded, anterior margin truncate, thoracic groove distinct; eyes cover middle of head, anterior row very lightly recurved, eyes subequal and equidistant, a.m.e. dark, separated by about a radius, posterior row a little longer than anterior, straight, and subequal, p.m.e. separated by more than a diameter and from p.l.e. by less, lateral eyes separated by less than a radius; quadrangle of median eyes narrower in front and higher

than wide; clypeus less than diameter of a.m.e.; mandibles much swollen at base, more than half the length of cephalothorax and divergent, fang groove oblique, superior margin with three teeth, inferior margin with six very small teeth or granules, fang long and evenly curved; labrium as long as wide, tip rebordered, lateral margins at base notched; maxillae nearly twice as long as labium, parallel and lightly impressed, palpi inserted from basal third; sternum heart-shaped, as long as wide, IV coxae separated by a diameter; abdomen grayish-brown, basal half with a thin covering of short hairs, oval, two-thirds as wide as long, dorsum rather flat, venter paler, spinnerets, inferior pair separated by more than a diameter, basal joint long, terminal joint short and conical, middle pair as long as inferior, superior pair, basal joint as long as inferior, and terminal joint about the same length, and pointed; legs, III and IV left missing, 1-2-4-3, same color as cephalothorax, with few hairs and no scopula on metatarsi and tarsi, spines I and II pairs, femur, dorsal, 1-1 about middle, patella, 0, tibia, ventral, 2-2, lateral, 1, metatarsus, ventral, 2-2, lateral, 0; epigynum, two oval openings, oblique, with heavily chitinized margins, separated by less than the long diameter.

♀ Cuba; Santiago de las Vegas, (Horne and House), Banks Coll.

This species was described in 1902 from a female from Bermuda, which is slightly larger than the Cuban specimen. A year later, Mr. Banks reported the same species from Haiti. Because of the widely separated spinnerets, the lightly impressed maxillae, and the thoracic groove, it can not be placed in the genus *Eutichurus*.

PARATHEUMA ISOLATA spec. nov.

Figure 170

Male. Length, 6.5 mm., ceph. 3.0 mm., abd. 3.5 mm.

Cephalothorax chestnut-brown, moderately convex, two-thirds as wide as long, sides evenly rounded, with a fringe of long hairs directed forward on posterior lateral margins, anterior margin truncate, thoracic groove long and distinct; eyes cover middle half of head, probably because of injury, the left p.m.e. is missing, anterior row slightly curved, eyes equidistant, a.m.e. largest of eight, separated by less than a radius, posterior row same length as anterior, slightly procurved, left p.l.e. smaller than right p.l.e., lateral eyes separated by less than a radius; quadrangle of median eyes same width in front as behind; clypeus about radius of a.m.e.; mandibles geniculate, vertical, brown,

median area covered with long dark bristles, superior margin of fang groove has three teeth, middle the largest, inferior margin has two widely separated teeth; labium as long as wide, tip rebordered, lateral margins at basal third deeply excavate, maxillae about twice as long as labium, plainly impressed, palpi inserted about middle and distal half distinctly narrowed; sternum pale brown, two-thirds as wide as long, pointed between IV coxae, which are separated by half a diameter; abdomen cylindrical, twice as long as wide, with a slightly darker basal mark extending beyond the middle, followed by five pairs of dark gray diagonal bars which could almost be called chevrons, sides gray, venter much paler; spinnerets, inferior pair long, separated by half a diameter, terminal joint conical, superior pair, basal joint same length, terminal joint as long as basal, and pointed, median pair hidden by inferior pair but as long as others; legs, much broken and rubbed, 4-1-2-3, pale brown, scant scopula on all tarsi, few hairs and spines, I and II pairs, patella, 0, tibia, ventral, 2-2-2, lateral, 0, metatarsus, ventral, 1-1, lateral, 0; palpus, tibia longer than patella and almost twice as long as terminal joint, tibial apophysis not as long as diameter of joint, flattened laterally, with a sharp black tip and serrate margins, palpal organ very simple and of the typical *Gnaphosid* type, embolus a very slender tube, starting from the base, following the contour of the cavity and ending with an abrupt turn at tip, conductor a slender ribbon-like piece from near the middle of the palpus, parallel to embolus, and protruding from the plane of the palpus.

Holotype ♂ Cuba; Isle of Pines, 1918, (Barbour and Brooks).

This species undoubtedly belongs near *Syrisca hirsuta* Petrunkevitch from Panama, and both should be placed in the *Gnaphosiae* because of the separated spinnerets and the impressed maxillae; these two characters are found only in that family. The generic position is not certain, and it is possible that *isolata* does not belong in *Paratheuma* because of the vertical mandibles, fewer teeth on fang groove, and light scopula on the tarsi.

Sub-family GNAPHOSINAE

Genus GNAPHOSA Latreille 1804

GNAPHOSA SERICATA (L. Koch)

Pythonissa sericata L. Koch, 1866, p. 31, pl. 2, fig. 21.

Herpyllus bicolor Hentz, 1847, p. 456, pl. 24,

fig. 4.

Gnaphosa spiralis F.O.P. Cambridge, 1899, p. 55, pl. 4, fig. 18.

Gnaphosa simplex Franganillo, 1926, p. 49.

A common species in the southern United States as far north as New York. The male palpus is much more complicated than is usual in the Gnaphosidae.

♀ Cuba; Soledad, 7 August, 1931, (Worley).

Sub-family DRASSODINAE

Genus EILICINA gen. nov.

Cephalothorax slender, not very convex, thoracic groove short; anterior row of eyes slightly recurved, a.m.e. largest of the eight and separated from a.l.e. by a line, eyes of posterior row well separated from anterior, almost straight, p.m.e. elliptical and oblique; clypeus about equal to diameter of a.m.e.; mandibles attenuate, inferior margin with carina, fang short; maxillae twice as long as wide, only slightly inclined towards labium, with tips widened; labium longer than wide with tip rounded; sternum oval, and prolonged in a point between fourth coxae; inferior spinnerets separated by a diameter; no dorsal spine on fourth tibia.

Type *Eilicina cincta* (Banks)

The genus differs from *Eilica* in the wider maxillae, and the eyes; from *Callilepis* by the short thoracic groove, the carina on the fang groove, and the eyes.

EILICINA CINCTA (Banks)

Figures 168, 172

Eilica cincta Banks, 1909, p. 157, pl. 45, fig. 8.

Female. Length, 4.3 mm., ceph. 2.0 mm., abd. 2.7 mm.

Cephalothorax golden-yellow, slightly darker about sides, two-thirds as wide as long, anterior margin one half the greatest width, thoracic groove short and rather deep; eyes occupy the middle half of the head, anterior row slightly recurved, a.m.e. dark, largest of the eight, separated by half a diameter, and from a.l.e. by a line, posterior row a little longer than anterior row and almost straight, a.m.e. and p.m.e. separated by almost two diameters of a.m.e., p.m.e. oval, separated by a little more than their long diameter, p.l.e. almost as large as a.m.e., lateral eyes separated by diameter of p.l.e.; quadrangle

of median eyes higher than wide and slightly narrower in front; clypeus low, about equal to diameter of a.m.e.; mandibles slightly attenuate, with scattered long hairs, median margin with darkened ridge, inferior margin of fang groove has a slight carina with a darkened edge the entire length, fang short and weak; labium longer than wide, tip rebordered; maxillae not twice as long as labium, slightly arcuate, tips broadened so that margin is circular, deeply impressed; sternum a deep yellow, two-thirds as wide as long, widest between II and III coxae, IV coxae separated by a diameter; abdomen dull gray, basal portion paler with a broad whitish bar across the middle, twice as long as wide, cylindrical, venter pale gray; spinnerets, inferior pair separated by more than a diameter, terminal joint of superior pair quite short; legs, all left legs, and I right missing, about the same color as the cephalothorax, spines, II femur, dorsal, 3 long spines, tibia not twice as long as patella, dorsal, 0, ventral, 1 at apex, 1 middle, metatarsus, 0, no spine above on IV tibia; epigynum shows two circular sacs below the skin, almost touching, each connected with a small black circle that may be the opening.

Holotype ♀ Cuba; Havana, (Baker), Banks Coll.

EILICINA ELEGANS spec. nov.

Figures 165, 169

Female. Length, 3.1 mm., ceph. 1.6 mm., abd. 1.8 mm.

Cephalothorax pale brown, faintly veined with black, most so anterior to the thoracic groove, anterior margin two-fifths greatest width, rather flat, thoracic groove short; eyes, anterior row straight, a.m.e. round, diurnal, separated by more than a radius, and touching smaller a.l.e., posterior row same length as anterior, slightly procurved, p.m.e. elliptical, oblique and touching, largest of the eight, almost touching p.l.e., lateral eyes subequal, separated by less than a radius, area between rows black; quadrangle of median eyes same width in front as behind, higher than wide; clypeus less than diameter of a.m.e.; mandibles vertical, attenuate with a long, strong black bristle on inner margin which interlaces, fang groove oblique, rather short, three teeth on superior margin; labium longer than wide; maxillae strongly impressed, slightly inclined over labium, palpi inserted below the middle; sternum pale, convex with strong bristles about margin, almost as wide as long, (4.5 : 5.5), IV coxae separated by a diameter; abdomen oval, more than twice as long as wide, dull

olive-brown, covered with long hairs and iridescent scales, venter paler with no scales, inferior spinnerets separated by more than a diameter; legs, I and II right and I and IV left missing, same color as cephalothorax, spines, II tibia, ventral, 1 slender pair at tip, metatarsus, ventral, 1 pair at base, IV tibia no dorsal spines, III metatarsus, distinct preening comb at tip; epigynum about twice as long as wide, openings probably at anterior end, just above the fold is a pair of clear ovals almost touching.

Holotype ♀ Cuba; Maisi, 15, 16 July, 1936, (Darlington).

Elieina elegans does not have the carina on the inferior margin of the fang groove as does *E. cineta* (Banks), but the eyes are very similar. *Callilepis insularis* Banks is much larger, but the eyes are very similar and the epigynum is on the same plan. It also has three teeth on the superior margin of the fang groove.

Genus CARIDRASSUS gen. nov.

Cephalothorax very slender, moderately convex; anterior margin not much narrowed, no thoracic groove; eyes, anterior row procurved, a.m.e. smaller than a.l.e., posterior row recurved, longer than anterior row, p.m.e. elliptical and oblique; mandibles small, margins of fang groove can not be seen, fang short; labium longer than wide; maxillae two and a half times as long as wide, sides almost parallel, tip not enlarged, and only slightly inclined towards labium; sternum oval and prolonged in a point between IV coxae; spines on legs same as in *Sergiolus*.

Type *Caridrassus wheeleri* spec. nov.

The genus is probably more closely related to *Echenus* than to *Sergiolus*, but the maxillae are not curved at the tip, and the posterior eye row is recurved.

CARIDRASSUS WHEELERI spec. nov.

Figures 166, 167

Female. Length, 3.5 mm., ceph. 1.2 mm., abd. 2.2. mm.

Cephalothorax dark brown, black between the eye rows, moderately convex, nearly twice as long as wide, no thoracic groove; eyes, anterior row procurved, a.m.e. smallest of the eight, separated by about a diameter and about the same distance from a.l.e., posterior row longer than anterior, slightly recurved, p.m.e. elliptical and oblique, separated

by a little more than their long diameter, p.l.e. and a.l.e. subequal, and separated by their diameter; quadrangle of median eyes narrower in front and as high as width between p.m.e.; clypeus equals diameter of a.l.e., a pair of very long bristles on the margin; mandibles small, brown, vertical, slightly swollen at base, median margin excavate with a row of stiff hairs, margins of fang groove impossible to see; labium pale brown, one and a half times as long as wide; maxillae pale, one and a half times as long as labium, slightly arcuate, tip not enlarged, slightly inclined over labium, palpi inserted at basal third; sternum slightly convex, two-thirds as wide as long, ending in a point between IV coxae, IV coxae separated by a diameter; abdomen more than twice as long as wide, with a broad dark median stripe from base to tip, widest above spinnerets, pale area each side extends two-thirds length of abdomen, sides dark, dark area with small iridescent scales, venter pale, spinnerets, inferior pair separated by diameter, tip bilobed with smaller lobe on inner side; coxae and trochanters pale yellow, legs much broken, femora dark brown, patellae dark at tip, other joints pale, posterior tibiae dark with lateral stripes, spines, I and II pairs, tibia, 1 or 2 ventral near tip, metatarsus, ventral, 1-1 at tip, all very slender, no dorsal spines on tibiae III and IV; epigynum, two circular openings separated by a diameter and a half, these are superimposed on round dark sacs, in anterior portion there are two dark masses of twisted and coiled tubes.

Holotype ♀ Cuba; Cienaga de Zapata, February, 1913 (Wheeler).

This species while small, is very strikingly marked. The small lobe at the tip of the inferior spinneret is found in the genus *Theuma* of the Gnaphosidae, and in *Zimiris* of the Prodidomidae. The species is named for the late Dr. W. M. Wheeler who studied spiders many years ago.

Genus LITOPYLLUS Chamberlin 1922

LITOPYLLUS INCONSPICUUS spec. nov.

Figure 176

Female. Length, 3.5 mm., ceph. 1.6 mm., abd. 2.1 mm.

Cephalothorax bright brown, scantily covered with fine hairs, rather low, two-thirds as wide as long, anterior margin a little more than half the greatest width, thoracic groove short but distinct; eyes closely grouped, covering two-thirds of head, anterior row procurved, a.m.e. largest of the eight, almost touching and touching a.l.e., posterior row

same length as anterior and slightly more procurved, p.m.e. triangular, oblique, separated by less than short diameter and almost touching p.l.e., lateral eyes touching; quadrangle same width in front as behind, higher than wide; clypeus less than diameter of a.m.e.; mandibles brown, vertical, fang groove oblique, superior margin with one tooth, inferior margin with one very small tooth; labium as long as wide, tip narrowed; maxillae twice as long as labium, distinctly impressed, and only slightly inclined over labium, upper margin with a black carina; sternum pale brown, slightly convex, oval, two-thirds as wide as long, IV coxae separated by less than a diameter; abdomen pale, thickly covered with long, fine hairs, oval, two-thirds as wide as long, venter same color, spinnerets, inferior pair separated by almost two diameters; legs, 4-1-2-3, pale brown, covered with fine hairs, spines, I pair, femur, dorsal, 1-1-1, patella, 0, tibia, 0, metatarsus, 0, II pair same as I pair, III pair, femur, dorsal, 1-1-1, patella, 2, tibia, dorsal, 1, lateral, 2, ventral, 2-2-1, metatarsus, dorsal and ventral spines not paired, IV pair, femur, dorsal, 1-1-1, patella, 2, tibia, dorsal, 0, ventral, 2-2-2, lateral, 3, metatarsus, not paired; epigynum, a transverse oval depression with the anterior margins heavily chitinized and fringed with long hairs, between depression and the fold, is a pair of dark circular sacs beneath the skin that are separated by less than a diameter.

Holotype ♀ Cuba; Soledad, April 1936, (Darlington).

The genus *Litopyllus* originally included three species. It is closely related to *Herpyllus*, but is separated by the larger posterior median eyes that are close together. The Cuban species is much smaller than any described, but it agrees with others in the size and the position of the eyes, and the dorsal spine on the third tibia.

Genus PARAMYRMECION gen. nov.

Cephalothorax moderately convex, anterior margin narrowed to less than half the greatest width, thoracic groove distinct; eyes, anterior row straight, a.m.e. diurnal, larger than a.l.e., posterior row same length as anterior row, plainly procurved, p.m.e. oval, nearer p.l.e. than to each other; quadrangle higher than wide; mandibles vertical, no teeth on either margin of fang groove; first tibia with one small ventral spine at tip; third tibia with one dorsal spine at base and lateral spines.

Type *Paramyrmeccion cubanum* spec. nov.

This genus agrees with *Megamyrmecon* in the lack of teeth on the inferior margin of the fang groove, but differs in the slightly procurved posterior eye row, no teeth on the superior margin of the fang groove, and in the few spines on the anterior legs.

PARAMYRMECON CUBANUM spec. nov.

Figures 173, 175

Female. Length, 5.5 mm., ceph. 2.0 mm., abd. 3.3 mm.

Cephalothorax deep yellow, with inconspicuous hairs on the sides, moderately convex, head narrowed to less than half the greatest width, thoracic groove distinct; eyes, covering a little more than half the width of head, anterior row straight, a.m.e. diurnal, largest of the eight, separated by a little more than a radius and almost touching a.l.e., posterior row same length as anterior, procurved, p.m.e. oval, separated by their short diameter and from p.l.e. by less, p.l.e. triangular, separated from a.l.e. by less than half a diameter; quadrangle of median eyes higher than wide, width same in front as behind; clypeus little more than diameter of a.m.e.; mandibles pale brown, small, vertical, fang groove short with no teeth on either margin, no scopula; labium longer than wide, lateral margins on basal third notched; maxillae brown, one and a half times as long as labium, inclined over labium, with black keel on upper margin, emarginate on outer side, palpi inserted about middle; sternum yellow, oval, widest between second coxae, posterior sides very hairy and ending in a hairy point in front of IV of coxae, IV coxae separated by less than half a diameter; abdomen pale yellowish-gray, about twice as long as wide, with a few long hairs, venter pale, inferior spinnerets separated by a diameter; legs, 4-1-2-3, pale yellow, I and II left legs missing, scopula on anterior tarsi and metatarsi, spines, I pair, femur, dorsal, 1 about middle, tibia, ventral, 1 very small at tip, metatarsus, ventral, 1 very small at base, II pair, femur, dorsal, 1 basal, tibia, ventral, 1 about middle, 1 at tip, metatarsus, 0, III pair, tibia, dorsal, 1-1,; epigynum, openings a pair of small round depressions separated by a broad median septum which widens near fold, on each side are two circular dark bodies beneath the skin.

Holotype ♀ Cuba; Soledad, 12 August, 1931, (Banks).

This species differs from others in the lack of teeth on the fang groove, the procurved posterior eye row, the thoracic groove, and in the few spines on the anterior legs.

Genus POECILOCHROA Westring 1874

POECILOCHROA MINUTA Banks

Figure 171

Poecilochroa minuta Banks, 1898, p. 185.

Male. Length, 4.0 mm., ceph. 1.9 mm., abd. 2.2 mm.

Cephalothorax dark chestnut-brown, middle area paler, black in eye area, a few white hairs on sides, anterior margin less than half the greatest width, thoracic groove short and inconspicuous; eye area covers two-thirds width of head, anterior row of eyes recurved, eyes subequal, a.m.e. separated by a diameter and almost touching a.l.e., posterior row slightly longer than anterior and very slightly recurved, p.m.e. largest of the eight, a broad oval, slightly oblique, separated by one and a half long diameters and from p.l.e. by a short diameter, lateral eyes separated by more than diameter of a.l.e.; quadrangle of median eyes higher than wide and narrower in front; clypeus vertical, equal to a little more than diameter of a.m.e.; mandibles dark brown, vertical, fang groove short with no tooth or plate on inferior margin; labium longer than wide; maxillae dark brown, twice as long as labium, sides parallel, tip truncate with a black keel, deeply impressed; sternum brown, darker on margins, oval, two-thirds as wide as long, widest between second coxae, fourth coxae separated by half a diameter; abdomen darker than cephalothorax, dorsal scutum at base covering two-thirds of abdomen, sides with white hairs, iridescent, venter pale brown, inferior spinnerets separated by more than a diameter; legs, I coxae darkest, others bright yellow, all femora dark, other joints pale yellow, hairy, scant scopula on anterior tibiae and metatarsi, long spines on dorsal side of femora, I and II pairs, tibia, ventral, 1-1 at tip, metatarsus, ventral, 1-1, at base, III tibia, dorsal, 1 median; palpus, patella and tibia of equal length, tibial apophysis long, flattened and almost reaching middle of tarsus, palpal organ voluminous, embolus a short stiff point at tip.

♂ Cuba; Soledad, sweeping, 16 August, 1931, (Worley)

The type of *Poecilochroa minuta*, from Brazos Co., Texas, is in the N. Banks Collection. It is in very bad condition and one palpus and abdomen is missing. It is more hairy than the Cuban specimen and very much faded from age. In the original description, no mention is made of the dorsal scutum, but this may vary in size and color and could be easily overlooked. The palpi, however, are alike in all de-

tails. The Cuban specimen was taken by sweeping, and it is not unlikely that the species lives with ants and resembles its host in size and color.

Genus *TEMINIUS* Keyserling 1887

TEMINIUS CLARISSA (Franganillo)

Syrisca clarissa Franganillo, 1926, p. 60; id., 1936, p. 122.

Female. Length, 12.0 mm., ceph. 5.5 mm., long, 4.0 mm. wide, ant. margin, 3.0 mm., abd. 6.7 mm.

Cephalothorax pale brown, thickly covered with fine black hairs and bristles, moderately convex, sides rounded, thoracic groove distinct; eyes cover half of head, anterior row straight, a.m.e. slightly largest of eight, separated by more than a radius and from a.l.e. by a radius, posterior row little longer than anterior, eyes subequal and equidistant, separated by a diameter and a half, lateral eyes separated by about a diameter of p.l.e.; quadrangle of median eyes slightly wider in front and about as high as wide; clypeus a little less than diameter of a.m.e.; mandibles reddish-brown, strongly geniculate at base and covered with long black hairs, superior margin of fang groove has three teeth of which the middle is the largest, inferior margin with two well separated teeth, scopula on superior margin only, fang long and curved; labium reddish-brown, longer than wide, lateral margins at basal third deeply excavate, tip rebordered; maxillae brown, twice as long as labium, tip oblique and scopulate, lightly impressed, palpi inserted about the middle; sternum oval, widest between second coxae, rounded at tip, fourth coxae separated by less than a diameter; abdomen dark gray with a wide median stripe pale stripe from base to middle, indistinct broken chevrons on posterior half, venter pale; spinnerets, inferior pair separated by a diameter, basal joint thick, terminal joint short and conical, median pair very thick, superior pair, basal joint as long as inferior, terminal joint equally long and pointed; legs, 4-1-2-3, pale yellow, heavily coated with fine black hairs; legs rather short, anterior tarsi and metatarsi densely scopulate to base, posterior pairs not as heavily scopulate, spines, 1 pair, femur, dorsal, 2 or 3 long spines, patella, 0, tibia, ventral, 1-1 long, slender spines easily overlooked in the dark hairs, lateral, 0, metatarsus, 0, posterior tibiae, several dorsal spines, ventral, 2-2-2; epigynum similar to figures of *Syrisca pulchra* Petr. and *Syrisca keyserlingi* Simon.

♀ Cuba; Siboney, 1915, (Rodriguez).

♀ Cuba; Havana, *Teminius insularis* Banks, nec Keyserling.

♀ Cuba; Santiago de las Vegas, *Teminius insularis* Banks.

♀ Cuba; San Antonio de los Baños, 21 March, 1915, (Barbour).

4 ♀ Cuba; Havana, 12 June, (Baker), Banks Coll.

The Cuban specimens are probably *Syrisca clarissa* Franganillo, although they differ a little from his very brief description. The anterior tibiae are described as spineless but in all specimens seen, there are two long slender spines easily confused with black hairs. It differs from *Syrisca pulchra* Petr. from Panama and Puerto Rico by the position of the p.m.e. In the Cuban species the p.m.e are separated by a diameter and a half, and in the species from Puerto Rico by one diameter. This species also has no spines beneath an anterior tibiae. *Teminius insularis* Keyserling from Haiti, the type of which is now before me, also has the p.m.e. separated by a diameter, the cephalothorax is much narrowed in front, and the anterior tibiae are spineless. In all three species, the epigynum is very similar but the type of *T. insularis* may be one moult from maturity. The same may be true of the specimens figured as *Syrisca hirsuta* Petr., Spiders from Panama, Trans. Conn. Acad., 1925, 27, p. 151, fig. 76. It is possible that *Syrisca pulchra* Petr., figured from Puerto Rico, is *Teminius insularis* Keys. Until males are known of the various species, they can not be definitely separated.

Keyserling, in his description of the genus *Teminius*, definitely states that the maxillae have a diagonal impression and the genus is placed in the Drassidae. The genotype, *Teminius insularis*, is from Haiti and the inferior spinnerets are separated by fully a diameter. These two characters are confined to the Gnaphosidae. In 1897, in the Hist. Nat. Araignées, Simon treats *Teminius* Keys. as a possible synonym of *Syrisca*. The type of *Syrisca* is from Senegal, and probably belongs to the Clubionidae.

Family SPARASSIDAE

Sub-family SPARIANTHIDINAE

Genus PSEUDOSPARIANTHIS Simon 1887

PSEUDOSPARIANTHIS CUBANA Banks

Pseudosparianthis cubana Banks, 1909, p. 165, pl. 45, fig. 4; Bryant, 1933, p. 192.

Tentabunda cubana Fox, 1937, p. 464, figs. 5, 11.

Female. Length, 10.0 mm., without mandibles or spinnerets, ceph. 4.2 mm., abd. 6.0 mm.

Cephalothorax yellowish-brown, with many stiff black hairs or bristles, thoracic groove wanting; eyes, anterior row straight, a.m.e. largest of the eight, separated by more than a diameter and from a.l.e. by a diameter and a half, posterior row a little longer than anterior, procurved, eyes subequal and almost equidistant, lateral eyes subequal and separated by a diameter; quadrangle of median eyes narrower in front and wider than high; clypeus less than diameter of a.m.e.; mandibles reddish-brown with many long stiff bristles, superior margin of fang groove with three large teeth on left, and three large and one small on right mandible, inferior margin with six minute teeth; labium wider than long, lateral margins slightly excavate at base, tip straight; maxillae much wider at tip than at base, more than twice as long as labium; sternum yellowish, triangular, almost as wide as long, fourth coxae separated by less than half a diameter; abdomen grayishyellow with irregular black spots most numerous on posterior half where they form chevrons, venter pale with dark spots on sides and near spinnerets; spinnerets on a common basal segment; legs, 4-1-2-3, golden-brown, spines, I and II pairs, tibia, ventral, 2-2, 1 prolateral at tip, dorsal, 0, metatarsus, ventral, 1-1 about one-third from base, I and II metatarsi heavily scopulate, III and IV metatarsi with a cluster of small curved spines or bristles at center of apex beneath; epigynum a broad ellipse a diameter and a half from the fold, with a heavily chitinated margin and a faint median septum, posterior are a pair of dark sacs beneath the skin separated by a narrow slit.

Holotype ♀ Cuba; Havana, (Baker), Banks Coll.

Paratype ♀ Cuba; Santiago de las Vegas, beneath a leaf, 25 October, 1908, (Houser), Banks Col.

2 ♀ Cuba; Soledad, garden from dead banana leaves, 8 August, 1931, (Worley).

Simon founded the genus *Pseudosparianthis* on two species from the Amazon. Later he described another species from St. Vincent. In 1900, F. O. P. Cambridge reported a fourth species from Mexico, stating that eventually it would be necessary to modify the genus as he found the number of teeth on both margins of the fang groove to be variable. *P. cubana* is nearer to *Pseudosparianthis* than to *Stasina*.

It is possible that the genus *Decaphora* Franganillo is a synonym, although the original description states there are five strong teeth on the superior margin of the fang groove and five small ones on the inferior margin. The only species in the genus *Decaphora* is from Sierra

de Rangel, which is not far from the type locality of *Pseudosparianthis cubana*. The number of teeth on the fang groove varies in immature and adult specimens. Among the numerous half grown females, many have five teeth on the superior margin and six very small ones in the inferior.

In 1937, Irving Fox described the genus *Tentabunda* for *Pseudosparianthis cubana* because it has one pair of spines beneath on the anterior metatarsi, separating it from true *Pseudosparianthis* which has two pairs. He describes for the first time the male from a specimen found at Coronado Beach, Volusia Co., Florida.

Genus STASINA Simon 1877

STASINA LUCASI spec. nov.

Figures 179, 182

Female. Length, 8.0 mm., ceph. 4.0 mm. long, 3.5 mm. wide, abd. 5.0 mm.

Cephalothorax bright yellow, covered with dark hairs which are longer and heavier on the cephalic portion, thoracic groove short, cephalic portion slopes gradually to groove, then abruptly to posterior margin, lateral striae meet in front of groove; eyes cover two-thirds of width of anterior margin, anterior row very slightly procurved, equidistant, a.m.e. slightly largest of eight, separated by about a diameter, posterior row procurved, a little longer than anterior, eyes subequal and equidistant, lateral eyes separated by little more than a radius; quadrangle of median eyes narrower in front and wider than high; clypeus less than a diameter of a.m.e.; mandibles vertical, somewhat swollen, covered with short black hairs in rows, boss very small, fang groove oblique, superior margin with three teeth, first two subequal and third much smaller, scopula from teeth to base of fang, interior margin with two minute teeth widely separated, fang with a thick base and evenly curved; labium wider than long, lateral margins at basal third excavate; maxillae more than twice as long as labium, sides parallel; sternum pale, shield-shape, nearly as wide as long, ending in a hairy knob in front of fourth coxae, which are separated by half a diameter; abdomen brown, covered with dark marks arranged in longitudinal lines on basal half so as to leave a pair of pale median stripes, and on posterior half forming indistinct chevrons, venter with dark spots in lines; spinnerets closely grouped on a cylindrical base which is separated from

the abdomen by a membrane; legs, 2-4-1-3, not varying greatly in length, yellow, with anterior tarsi and metatarsi darker, anterior metatarsi and tarsi with a dense iridescent scopula which is missing on IV and much reduced on the III metatarsi, spines, no spine on patellae, I and II pairs, tibia, ventral, 2-2-2, very long and overlapping, followed by 3 very slender curved spines, lateral, O, dorsal, O, metatarsus, ventral, 1-1 basal, very long, lateral, O, dorsal, O, epigynum a rectangular area with a rounded lip on posterior margin, center filled with a white substance, anterior are two reddish-brown pear-shaped sacs beneath the skin, separated by their diameter.

Male. Length, 6.0 mm., cepth. 3.0 mm. long, 2.8 mm. wide, abd. 3.0 mm.

Cephalothorax pale yellow, shaded with dark brown, showing dark anterior radial striae, black hairs much smaller than on female and head more narrowed; eyes and clypeus same as in female; mandibles smaller, boss very small, superior margin of fang groove with two teeth on right mandible and three on left, inferior margin the two small teeth small teeth reduced to granules; labium, maxillae and sternum same as in female; abdomen with dark spots arranged in lines; legs longer than in female, spines, no spines on patellae, I and II pairs, tibia, ventral, 2-2-2, long and overlapping, 1 small, prolateral spine opposite basal pair, lateral, 2-2, dorsal, 1 median near tip, metatarsus, ventral, 2 basal, lateral, 1-1, scopula not as heavy on anterior tarsi and metatarsi as in female and almost wanting on III metatarsus; palpus as long as cephalothorax, tibia and patella of equal length, tibia with a large prolateral basal spine, on dorsal side a dark apophysis which interlocks with lobe on cymbium, terminal joint large, three quarters as wide as long, bulb produced in a narrow lobe which projects beyond the cymbium and rests on the tibia and evidently interlocks with a dark tibial apophysis, embolus arises at inner margin about the middle, follows the contour of cavity and ends about opposite origin, above the tip of the embolus and at one side is a dark hook with a broad base which projects from the plane of the palpus and in the middle between embolus and hook are two soft white structures, one a slender twisted filament ending on margin near the middle of the cavity and the other a broad lobe, cymbium covered with short hairs.

Holotype ♂ Cuba; Oriente, Sierra de Cobre, 3,000-3,800 feet, 3-7 July, 1936, (Darlington).

Allotype ♀ Cuba; Oriente, South side Pico Turquino, 3,000-5,000 feet, June 1936, (Darlington).

STASINA MACLEAYI spec. nov.

Figures 174, 180

Female, Length, 10.2 mm., ceph. 4.1 mm., abd. 6.2 mm. long, 4.1 mm. wide.

Cephalothorax pale with many dark hairs and dark lines and with hairs radiating from the thoracic groove; eyes, anterior row slightly procurved, eyes subequal, a.m.e. slightly nearer each other than to a.l.e., posterior row slightly longer, eyes equidistant, p.m.e. smaller than p.l.e. or a.m.e.; quadrangle of median eyes narrower in front and wider than high; clypeus as high as a.m.e.; mandibles pale, covered with long dark hairs, swollen in front, fang groove oblique, three teeth on superior margin of fang groove, middle one largest, two minute teeth, widely separated on inferior margin; sternum pale; abdomen pale, covered with dark hairs and irregular shaped dots, not arranged in any pattern, venter pale with a few scattered dark dots; legs 4-2-1-3, little difference in length, pale, ventral side of femora with many dark spots, anterior metatarsi with heavy iridescent scopula, not as heavy on III metatarsus and much lighter on IV, spines, I pair, femur, scattering on dorsal side, patella, 0, tibia, ventral, 2-2-2, lateral, 2, dorsal, 0, spines on II pair same but smaller; epigynum a small semicircular chitinized lobe, as wide as long, anterior beneath the skin are two long narrow darkened areas, almost parallel.

Male. Length, 6.1 mm., ceph. 3.6 mm., abd. 2.6 mm.

Cephalothorax same as in female but the dark lines are less numerous and not as heavy; eyes same as in female; mandibles smaller, teeth same; abdomen same as in female with dark dots on a pale ground; legs, 4-2-1-3, pale, with no dark dots, very slender, scopula on metatarsi not as heavy as in female, spines, I and II pairs, femur, scattered, patella, 0, tibia, ventral, 2-2-2, lateral, 2-2 and 1 small spine opposite basal pair, dorsal, 1 small spine near tip, metatarsus, ventral, 2-2, lateral, 1-1, dorsal, 0; palpus, about as long as cephalothorax, tibia little longer patella, with a rounded lateral knob near base on retrolateral side and two heavily chitinized apophysis at distal end, the outer much larger and heavier, the lower small and covered by lobe from bulb, embolus starts from near base, follows contour of cavity and ends at the tip with end bent at right angle from the plane, parallel and directly below is the conductor, not as heavily chitinized, with tip also bent at an angle, below tip on conductor is a sharp tooth, in the middle arises a white filament, the basal half rather

broad with distal half very slender and curved like a sickle, ending between embolus and conductor, the opposite side is filled with a triangular lobe with a dark tip.

Holotype ♂ Cuba; Oriente, South side Pico Turquino, 3,000–5,000 feet, June, 1936, (Darlington).

Allotype ♀ Cuba; Orient, South side Pico Turquino, 3,000–5,000 feet, June, 1936, (Darlington).

The genotype of *Stasina* came from the Philippines but in the same paper, Simon described two species from Brazil. Petrunkevitch described a female from Puerto Rico. From the figure of the epigynum of this latter species, it is very likely that it is immature. In 1936, Franganillo described a species from the Sierra de Rangel, comparing it with the species from Puerto Rico, so it is probably a female. His description gives little more than the generic characters.

There are, evidently, at least two species of the genus in the Oriente, easily separated in the males by the tibia of the palpus and the embolus. The females can be separated by the color of the abdomen, very dark in *S. lucasi* and pale in *S. macleayi*. Also, *S. lucasi* has no lateral spines on tibia and metatarsus, while *S. macleayi* has two lateral spines on the tibia and one lateral on the metatarsus. They also can be separated by the epigynum.

Two specimens of a third species from San Vicente and Soledad have been seen which do not agree with Franganillo's description and probably are undescribed. It is smaller than the other two with a smooth cephalothorax, pale abdomen with very few dark spots and the I tibia with four pairs of ventral spines, two lateral and two pairs on the metatarsus.

Sub-family HETEROPODINAE

Genus HETEROPODA Latreille 1804

HETEROPODA VENATORIA (Linn.)

Aranea venatoria Linnaeus, Syst. Nat., 1767, p. 1035.

This is a common cosmotropical species found in all tropical and subtropical regions. Petrunkevitch in his Spiders of Porto Rico Trans. Conn. Acad., 1930, **31**, p. 14, figs. 8–14, gives an account of the habits and figures the palpus and epigynum.

Family SELENOPIDAE
Sub-family SELENOPINAE
SELENOPS CELER (MacLeay)

Figure 178

Hypolataca celer MacLeay, Ann. Mag. Nat. Hist., 1839, p. 6, pl. 1, fig. 2.

Selenops celer, Banks, 1909, p. 165.

Female. Length, 6.5 mm., ceph. 3.0 mm. long, 3.2 mm. wide, abd. 3.8 mm.

Cephalothorax bright brown with darker margins, stiff black bristles about lateral margins directed forward, sides covered with short, white hairs, radial striae distinctly marked; eyes, anterior row recurved, a.m.e. separated by a little more than a diameter and from p.m.e. by less than half a diameter, a.m.e. about two-thirds diameter of p.m.e., a.l.e. oval, less than one half diameter of a.m.e., very near margin of clypeus, p.m.e. separated from p.l.e. by more than diameter of p.l.e.; mandibles brown, swollen at base, superior margin of fang groove with three teeth, middle one largest, scopula on superior margin, inferior margin with two widely separated teeth; labium wider than long, tip rounded, lateral margins at basal half excavate; maxillae more than twice as long as labium, inner margins parallel; sternum almost round, tip bilobed; abdomen grayish-brown without marks, broadest at base, sides dark, venter pale gray; legs missing, the three remaining have three wide spots on dorsal sides of femora, tibiae and metatarsi which look like bands, ventral sides pale, spines, I and II pairs, tibia, 2-2-2, lateral, 0, metatarsus, ventral, 2-2, lateral, 0; epigynum, a triangular light area, with margins strongly chitinized, with apex near fold, each side of apex are two horizontal dark tubes beneath the skin, openings are probably in large, widely separated depressions near base of triangle.

♀ Cuba; Santiago de las Vegas, (Baker), Banks Coll.

♀ Cuba; Soledad, under bark in sugar field, 3 August 1931, (Worley).

The specimen from Santiago de las Vegas is dark from age and the legs are much broken, so that the relative lengths cannot be given, but it was collected near the type locality and the markings on the legs and the eyes are very much like the original figures. The specimen from Soledad may be one molt from maturity but it is evidently the same species.

SELENOPS FORMOSUS spec. nov.

Figure 181

Female. Length, 9.5 mm. long, including mandibles, ceph. 3.5 mm. long, 4.0 mm. wide, abd. 5.5 mm.

Cephalothorax chestnut-brown, margins black, sides heavily veined with black, lateral margins with stiff black bristles directed forward, cephalothorax thickly covered with short white hairs most conspicuous when dry; eyes, row of median eyes slightly recurved, a.m.e. separated by a scant diameter and from p.m.e. by less than a diameter, a.m.e. about three-quarters of diameter of p.m.e., a.l.e. oval, less than one-half diameter of a.m.e., directly below p.l.e. and about a diameter of a.l.e. from latter; mandibles chestnut-brown with two divergent black lines, swollen at base, stiff black hairs on median edge, superior margin of fang groove with three teeth, scant scopula of long hairs to base of fang, inferior margin with two subequal teeth; labium wider than long, tip rounded, lateral margins excavate at basal half; maxillae more than twice as long as labium, margins almost parallel; sternum bright yellow, almost round, tip bilobed; abdomen pale, heavily mottled with black and irregular chevrons on posterior half, sides dark, venter pale; legs, I and II left legs missing, 2-3-1-4, II and III pairs of almost equal length, bright yellow with three broken dark bands on dorsal sides of femora and two dark bands on tibiae and metatarsi, ventral sides pale, spines, I and II pairs, tibia, ventral, 2-2-2, long and overlapping, lateral, 0, metatarsus, ventral, 2-2, long and overlapping, lateral, 0; epigynum is similar to *Selenops insularis* Keys. but the median Y-shaped suture is very slender and has a very long stem.

Holotype ♀ Cuba; Soledad, quarry, 4 August, 1931, (Worley).

This species is smaller than *Selenops insularis* Keys. and has a different epigynum.

SELENOPS INSULARIS Keyserling

Selenops insularis Keys., 1881, p. 311, pl. 11, fig. 28; Petrunkevitch, 1930, p. 31, figs. 21-25.

This species was described from a female from Haiti, which is now in the Museum of Comparative Zoölogy. Petrunkevitch found it in Puerto Rico and described the male for the first time. Both males and females have been found at Havana and Soledad, and Franganillo has reported a male from Guantánamo, Oriente.

SELENOPS SUBMACULOSUS spec. nov.

Figures 177, 184

Female. Length, 13.0 mm., including mandibles, ceph. 4.5 mm. long, 5.2 mm. wide, abd. 7.0 mm.

Cephalothorax reddish-brown with a narrow black marginal line and long stiff bristles directed forward, sides with soft white hairs, black about p.l.e.; eyes, row of median eyes slightly recurved, p.m.e. only slightly larger than a.m.e., a.m.e. separated by a scant diameter and from p.m.e. by less than a radius, a.l.e. oval, small, upper margins on a straight line with lower margins of p.m.e. and midway between p.m.e. and p.l.e.; clypeus about equals one-half diameter of a.m.e.; mandibles chestnut-brown with two narrow divergent black stripes, superior margin of fang groove with three teeth, middle one largest, inferior margin with two widely separated teeth, scopula on superior margin; labium wider than long, lateral margins at basal third deeply excavate; maxillae twice as long as labium, sides parallel; sternum bright yellow, as wide as long, tip deeply bi-lobed; abdomen yellowish-gray with sides black from fold to spinnerets; legs, 2-3-4-1, yellowish-gray with prolateral black stripe with an irregular margin, so that it extends on dorsal side as points of all femora, tibiae and metatarsi, spines, I and II pairs, tibia, ventral, 2-2-2, middle pair longest, lateral, 0, metatarsus, ventral, 2-2, lateral, 0; very little difference in length of legs; I and IV left missing; epigynum of the usual triangular shape with dark parts showing beneath the skin, openings probably in widely separated depressions each side of basal part of triangular area.

Male. Length, 9.0 mm., ceph. 4.5 mm. long, 4.5 mm. wide, abd. 4.5 mm.

Cephalothorax light reddish-brown with a narrow black marginal line; eyes, mandibles, maxillae and labium same as in female; sternum not as deeply bi-lobed as in female; abdomen same as in female; legs, 2-3-4-1, much longer and more slender than in female, the dark prolateral stripe less conspicuous and without the irregular margin found in the female, spines, I and II pairs, tibia, ventral, 2-2-2, lateral, 2, metatarsus, ventral, 2-2, lateral, 1; palpus, patella and tibia of about equal length, upper apophysis of tibia large, dark and sides folded inward, lower apophysis a rounded black lobe pressed flat on the under side of tibia and best seen in a lateral view, palpal organ similar to *Selenops insularis* Keys. but "the pick-ax" conductor with a much

longer stem and the ends sharper, the small hook process above the origin of the embolus is bifid, and the inferior tip is short and slender.

Holotype ♀ Cuba; Soledad, February 1925, (Salt).

Allotype ♂ Cuba; Soledad, February 1925, (Salt).

Paratypes ♂ ♀ Cuba; Soledad, February, (Salt).

It is possible that Franganillo's identification of *Selenops radiatus* Latreille may be this species. Simon describes it with black lateral lines and sometimes a cross black line on the abdomen, but the figures show that p.m.e. are much farther from the a.l.e. than in the Cuban species. *Selenops radiatus* is found in Spain, Southern France, about the shores of the Mediterranean, and in Southern Asia.

SELENOPS TIMIDUS spec. nov.

Figure 183

Female. Length, 12.5 mm., including mandibles, ceph. 5.0 mm. long, 5.5 mm. wide, abd. 6.5 mm.

Cephalothorax golden-brown, darker about eyes, a faint black line about the margin, edge of carapace with long black hairs, not bristles, directed forward; eyes, row of median eyes slightly recurved, a.m.e. about two-thirds diameter of p.m.e. and separated from each other by a little more than a diameter and from p.m.e. by about a diameter, lower margins of median eyes form a straight line, a.l.e. small, oval, directly beneath p.l.e. and nearer to p.l.e. than to p.m.e.; mandibles reddish-chestnut, swollen at base and covered with long stiff bristles; superior margin of fang groove with three teeth, middle largest, scant scopula, inferior margin with two widely separated, subequal teeth; labium wider than long, lateral margin at base deeply excavate, tip straight; maxillae bright yellow, more than twice as long as labium; sternum bright yellow, wider than long, tip not deeply bi-lobed; abdomen pale brown, thickly covered with long silvery hairs, venter pale; legs, 2-3-4-1, pale brown without marks but metatarsi and tarsi darker; spines, I and II pairs, tibia, ventral, 2-2-2, lateral, 0, metatarsus, ventral, 2-2, lateral, 0, II, III and IV right legs missing; epigynum a large circular opening above two darkened circles beneath the skin, with a notch above the fold that is shallow and truncate.

Holotype ♀ Cuba; Esenada de Cochinos, 2 March, 1917, (Barbour and Brooks).

This species is the same size as the specimen described by Keyserling from the Tortugas Islands, Florida in the Marx Collection under the

name *Selenops aissus* Walckenaer. Petrunkevitch, in his paper on Panama Spiders, Trans. Conn. Acad., 1925, **27**, p. 134, figs. 50-54, states that it is not *Selenops aissus* Walck., because the relative length of the legs does not agree with Walckenaer's statement. In 1883, Simon examined Walckenaer's type and found that the specimen was in such bad condition that a new description of it was impossible, although it undoubtedly belonged to that genus. Until the *Selenops* from Martinique are examined, it probably will be impossible to definitely determine Walckenaer's species. The difference in the length of legs is not very great, and one or even two millimeters would hardly be noticeable from a casual examination under a hand lens. The epigynum of *Selenops timidus* differs from the figures given by Keyserling and Petrunkevitch.

Family THOMISIDAE

Sub-family STEPHANOPSINAE

Genus ISALOIDES F.O.P. Cambridge 1900

ISALOIDES TOUSSANTI Banks

Figures 185, 189

Isaloides toussanti Banks, 1903, p. 343, pl. 15, fig. 3.

Male. Length, 4.0 mm., ceph. 1.6 mm. long, 1.8 mm. wide, abd. 2.2 mm.

Colors much faded probably from age.

Cephalothorax pale brown, slightly darker about margins, anterior margin less than half the greatest width; eyes, anterior row strongly recurved, a.l.e. largest of the eight, a.m.e. smallest, separated by about two diameters, posterior row slightly longer than anterior and not as strongly recurved, eyes equidistant, and p.m.e. but little smaller than p.l.e., p.m.e. separated by a diameter and a half, lateral eyes on separate tubercles; quadrangle of median eyes narrower in front and one and a half times as high as wide behind; clypeus as wide as space between a.m.e., retreating, with two long bristles on margin; mandibles vertical, with a few long bristles on median margin, but because of thick scopula teeth on fang groove they can not be seen; labium as long as wide; maxillae twice as long as labium; sternum triangular, widest between second coxae and ending in a point in front of fourth coxae, second coxae largest, twice as large as third, fourth coxae almost touching; abdomen two-thirds as wide as long, yellowish-gray,

paler on sides, six pairs of graduated tubercles or small blisters from base to spinnerets, and very long clavate bristles scattered over dorsum, venter pale, closely mottled with dark veins; legs, anterior pairs much longer than posterior, I pair,

femur	patella plus tibia	metatarsus	tarsus	total
3.0 mm.	4.0 mm.	3.0 mm.	1.0 mm.	11.0 mm.

anterior pairs, femur pale brown, tibia with a dark band at distal end, posterior pairs, paler, with dark band much narrower, spines, I and II pairs, femur, row of 4 dorsal spines and 3 very long prolateral spines, tibia, ventral, 2-2-2-2, distal pair very short, others about three times the diameter of the joint, lateral, 3, metatarsus, ventral, 2-2-2, distal pair very short, lateral, 3, scopula very scant on anterior tarsi and metatarsi; palpus very simple, femur as long as tibia plus patella, tibia but little longer than patella, with no apophysis; embolus a slender black tube, circling once and a half around margin and ending opposite to origin.

Holotype ♀ Haiti; Port au Prince, Banks Coll.

Allotype ♂ Cuba; Santiago de las Vegas, (Horne and Houser), Banks Coll.

♂ ♀ Cuba; Santiago de las Vegas, Banks Coll.

The genus was based on a female from Mexico. *Isaloides toussanti* Banks from Haiti is very similar to the type species but differs in the epigynum. The male has the anterior pairs of legs very much longer than in the female; the cephalothorax is wider and the abdomen has clavate bristles.

Genus ONOCOLUS Simon 1895

ONOCOLUS GRANULATA spec. nov.

Figures 186, 187

Male. Length, 2.5 mm., ceph. 1.2 mm., abd. 1.1 mm.

Cephalothorax chestnut-brown, posterior median area much paler, almost as wide as long, (4.4 : 5.0), much narrowed in front of first coxae, rather flat, with median third rising as a crest with a row of granules, radial striae marked by rows of small granules, sides evenly rounded, margin above first coxae granular; eyes cover two-thirds width of head, anterior row strongly recurved, a.m.e. smallest of the eight, separated by little over a diameter and from a.l.e. by a diameter, a.l.e. largest of the eight, fully twice diameter of a.m.e., posterior row straight, little longer than anterior, p.m.e. slightly smaller than p.l.e. and separated from p.l.e. by diameter of latter; quadrangle of median

eyes much narrower in front and about as wide as high; clypeus as high as quadrangle, inclined forward with a row of bristles on margin, each from a granule; mandibles dark brown, flat, cone-shaped, fang groove short, impossible to see teeth, fang short and weak; labium dark brown, wider than long, lateral margins on basal third notched; maxillae pale brown, twice as long as labium, inclined so that tips almost meet, palpi inserted about middle; sternum pale brown, three-quarters as wide as long, slightly convex, smooth, lateral margins notched, tip rounded between fourth coxae, fourth coxae separated by more than half a diameter; abdomen cream-white at base, dark brown at tip and on posterior lateral points, pentagonal, one-fourth wider than long, anterior and lateral margins granular, tip and posterior lateral angles with larger dark granules, three at tip and two on lateral angle, entire dorsum covered with small granules which on posterior half are in transverse rows, venter pale brown, sparsely covered with short hairs, sides with converging rows of granules, spinnerets surrounded by a chitinous ring; legs short, 1-2-3-4, III pair directed forward, anterior pairs dark brown, tarsi yellow, posterior pairs, femora brown, other joints pale, anterior pairs flattened anteriorly with a distinct edge marked with granules, short hairs on upper side and long hairs between spines, no spines on posterior pairs, spines, I and II pairs, tibia, ventral, 2-2-2, from a raised base, basal and median pairs longer than diameter of joint and overlapping, lateral, 0, dorsal, 0, metatarsus, ventral, 2-2-2, from a raised base, longer than diameter of joint, all spines with tips curved out, palpus short, dark brown, patella and tibia granular, tibial apophysis pale, not half as long as cymbium, truncate with a hook, palpal organ very simple.

Holotype ♂ Cuba; Sierra de Cobre, 3,000-3,800 feet, 3-7 July, 1936, (Darlington).

Onocolus granulata belongs to the section of the genus that has no paired tubercles on clypeus or between a.m.e. Franganillo has reported two species from the western part of Cuba that belong to this subfamily. In *Onocolus pentagona* (Keys.) from Peru, Brazil and Panama, more recently redescribed by Dr. Mello-Leitao, the male has a pentagonal abdomen with distinct spines at the tip and posterior angles and the palpus has a lateral spine on the patella. In the second species, *Stephanopoides brasiliiana* (Keys.), the p.m.e. are nearer each other than to the p.l.e. and the quadrangle of median eyes is scarcely narrowed in front. In the Banks Collection there are immature males from Santiago de las Vegas that have eyes similar to *Onocolus granulata*, but the lateral margins of the cephalothorax are almost parallel.

ONOCOLUS PALLESCENS spec. nov.

Figure 195

Female. Length, 8.0 mm., ceph. 3.6 mm. long, 3.1 mm. wide, abd. 4.5 mm. long, 4.5 mm. wide.

Cephalothorax pale yellow, flat and low, much narrowed in front of first coxae, sides almost parallel, a few granules on margin above first and fourth coxae, a few granules on posterior striae, no thoracic groove; eyes cover little more than middle half of front, anterior row strongly recurved, equidistant, a.m.e. smallest of eight, separated by a little more than a diameter, a.l.e. largest of the eight, posterior row longer than anterior, straight, eyes subequal, p.m.e. widely separated and by more than a diameter from p.l.e., lateral eyes separated by a diameter of a.l.e.; quadrangle much narrowed in front and as wide as high; clypeus about as high as quadrangle with four small tubercles on margin, each bearing a bristle; mandibles pale, vertical, fang groove slightly oblique, three small teeth on superior margin and two small teeth on inferior; labium pale, as long as wide; maxillae pale, twice as long as wide, (7 : 4), fourth coxae touching; abdomen pentagonal, white with bright brown spots at tip and at posterior angles, thickly covered with white granules which are largest at anterior margin, three large granules at tip, venter pale with hairs in center as in male, sides have converging rows of granules; legs, 1-2-3-4, III pair directed forward, white, I pair flattened anteriorly with rows of granules on edge, each bearing a small clavate bristle, spines, I and II pairs, tibia, ventral, 2-2-2, heavy, less than diameter of joint, lateral, 0, dorsal, 0, metatarsus, 2-2-2, basal and median pairs equal diameter of joint, all spines with tips that curve out, posterior pairs spineless; epigynum, an upward turned lobe with edge slightly chitinized, openings widely separated, with tubes almost touching and parallel, leading to sacs beneath openings.

Holotype ♀ Cuba; South side Pico Turquino, 3,000-5,000 feet, June 1936, (Darlington).

It is possible that *Onocolus pallescens* is the female of *O. granulata*, although they differ in several fundamental points that may not be sexual. In *O. pallescens*, the lateral margins of the cephalothorax are almost parallel, there are a few granules on the margins, and the radial striae are not marked by rows of granules; there is no median crest, the sternum is longer in proportion to the width, and the fourth coxae almost meet, while in *O. granulata* they are separated by a diameter.

According to Dr. Mello-Leitao, several species from Brazil show as much difference in size between male and female, and the striking difference in color is not unusual in other species of the family.

Genus PARASTEPHANOPS F.O.P. Cambridge 1900

PARASTEPHANOPS ECHINATUS (Banks)

Figure 194

Misumessus echinatus Banks, 1914, p. 641, pl. 43, fig. 6.

Female. Length, 8.0 mm., ceph. 3.5 mm. long, 3.2 mm. wide, abd. 4.8 mm., I femur, longer than ceph.

Cephalothorax yellowish, without any indications of a lateral dark stripe but has numerous scars from spines or bristles; eyes cover middle half of head, anterior row slightly recurved, a.m.e. very small and separated by a scant diameter, fully two diameters from a.l.e., a.l.e. largest of the eight, posterior row less recurved than anterior and slightly longer, eyes subequal, p.m.e. slightly nearer p.l.e. than to each other, lateral eyes on separate tubercles; quadrangle of median eyes much narrower in front and a little higher than wide behind; clypeus as high as quadrangle; mandibles rather flat in front, with scattered long hairs, inferior margin of fang groove with two subequal teeth, superior margin with three teeth, one large tooth about opposite teeth on inferior margin, a minute tooth near base of fang, and a tooth subequal to teeth on inferior margin on median edge, scant scopula on superior margin; labium slightly longer than wide, basal third excavate on lateral margin; maxillae about twice as long as wide, tips slightly enlarged and a little inclined over labium; sternum little longer than wide, flat, widest between first and second coxae, fourth coxae almost touching; abdomen pale yellow without marks, with scattered long hairs, venter with a broad white stripe from fold to spinnerets; legs, yellowish, anterior pairs longer than posterior, I and II subequal, spines, I pair, femur, 6 short, stubby spines and numerous hairs or bristles from corneous pits, tibia, ventral, 2-2-2-2, three basal pairs heavy and longer than the diameter of the joint, lateral, 3, metatarsus, ventral, 2-2-2, two basal pairs heavy and twice the diameter of the joint, lateral, 3, spines on II pair not quite as heavy as on I pair, III and IV pairs, few spines on femur and short paired spines on tibia and metatarsus; epigynum an oval depression, longer than wide, about one quarter above the fold, with two dark depres-

sions near base, separated by a narrow septum, midway between base of depression and fold are two dark dots close together.

Allotype ♀ Cuba; Santiago de las Vegas, (Horne and Houser), Banks Coll.

Through the kindness of Dr. W. J. Gertsch of the American Museum of Natural History, I have examined the holotype, a male from Pinar del Rio. The generic position of the species is uncertain. It has more characters in common with *Parastephanops* than with any genus in the Biol. Centr. Amer. However, it does not agree with that genus because of a single subapical spine beneath on metatarsi I and II, a primary character used by F.O.P. Cambridge in his key for genera; neither is the eye area bi-lobed, or the quadrangle of median eyes wider than high, a character that was not mentioned or figured by O.P. Cambridge in the original description of *Parastephanops cognatus*, the genotype; it does agree however, in eye arrangement and the number of teeth on the fang groove of the mandibles. At the same time, F.O.P. Cambridge made the genus *Isaloides* for a single species. In this genus the eye area occupies almost the entire width of the head, the p.l.e. are much larger than the p.m.e., and in the two species referred to the genus, the abdomen has paired blisters in the median area. This genus also, has a single subapical spine beneath on metatarsi I and II. The male has the same arrangement of eyes and the cephalothorax is covered with heavy spines. It is very much smaller than the female, a character often found among the Thomisidae.

Sub-family MISUMENINAE

Genus MISUMENOPS F.O.P. Cambridge 1900

MISUMENOPS BELLULUS (Banks)

Figures 188, 191, 192

Misumena bellula Banks, 1896, p. 71.

Female. Length, 4.0 mm., ceph. 1.5 mm. wide, 1.5 mm. long, abd. 2.5 mm.

Cephalothorax with broad dark stripes from p.l.e. to posterior margin, long black bristles outline cephalic portion; eyes, anterior row recurved, equidistant, a.m.e. slightly smaller than a.l.e., posterior row little longer than anterior, eyes subequal, p.m.e. a little nearer each other than to p.l.e., a faint depression on ridge between a.l.e. and p.l.e.; quadrangle of median eyes slightly wider behind and wider than high; clypeus slightly protruding, one half as high as quadrangle,

with several long bristles on margin; abdomen, median area shaded with gray, on posterior half are three dark cross bars, many scattered bristles, each from a red spot, venter pale; legs, anterior pairs much longer than posterior, pale with distal ends of joints darker, posterior pairs pale, all legs with few hairs, spines, I pair, femur, prolateral near base, 3, short and stout, dorsal, 3 or 4 on distal half, all shorter than diameter of the joint, tibia, ventral, 3-4, lateral, 0, metatarsus, ventral, 6 or 7 pairs, lateral, 0; epigynum with a chitinous hood or lobe at anterior end, above a triangular pale area, below are two pairs of horizontal dark bars starting from dark spots, these spots being nearer the pale area than the fold.

Male. Length, 2.5 mm., ceph. 1.0 long, 1.2 mm. wide, abd. 1.6 mm.

Cephalothorax and eyes same as in female; abdomen dark yellow, with cross bars less distinct than in female but with the same bristles from red dots, venter pale; legs, anterior pairs very long, dull yellow with many red spots and a narrow red ring at end of each joint, posterior pairs much shorter with narrower red rings at ends of joints, spines, I pair, femur, prolateral, 4, basal very short, dorsal, 4, all spines as long as diameter of joint, tibia, ventral, 2-2-2, long, slender and weak, prolateral, 3, long, dorsal, 4, metatarsus, ventral, 2-2, long and weak, prolateral, 2; the general appearance of the anterior pairs of legs, is of many long and slender spines; palpus, patella, and tibia of about equal length, tibial apophysis with a broad truncate tip with upper corner produced in a rounded point, palpal organ very simple, embolus arises from near the upper margin with a distinct dark lobe on outer side, extends across top of palpus as a broad thick tube, abruptly narrowing half way to tip, and continues as a slender black tube that curves from the plane, best seen in a lateral view and ends on the tutaculum above the tibial apophysis.

The type of this species was a female from Punta Gorda, Florida. Since then, both males and females have been found at Dunedin and the Royal Palm Park. It is a very common species in collections from Cuba, and has been taken at all seasons at Soledad. It is smaller than *M. celer* and varies greatly in coloring, especially in the females, as some have been seen with no abdominal pattern. The males are easily separated from the other species found in Cuba by the palpus, as the embolus has a dark lobe at the origin and narrows abruptly about the middle. The females can be distinguished by the epigynum where the two cross bars are usually distinct.

MISUMENOPS CELER (Hentz)

Thomisus celer Hentz, 1847, p. 446, pl. 23, fig. 5.

Misumena spinosa Keyserling, 1880, p. 86, pl. 2, fig. 42.

Misumenops spinosus, F.O.P. Cambridge, 1900, p. 144, pl. 10, fig. 6.

Misumenops celer, Petrunkevitch, 1930, **31**, p. 41, figs. 31-34.

This is a common species in the southern and western parts of the United States. It occurs in collections from Havana and Soledad, and probably will be found all over Cuba. Petrunkevitch found it in Puerto Rico.

MISUMENOPS OBLONGA (Keyserling)

Misumena oblonga Keyserling, 1880, p. 79, pl. 2, fig. 41; Emerton, Trans. Conn. Acad., 1892, **8**, p. 371, pl. 30, fig. 4.

Misumena americana Keyserling, 1880, p. 85, pl. 2, fig. 44.

This species can be separated from others found in Cuba by the very short spines on the first femur in both males and females. The male palpus, where the embolus gradually decreases in size, follows the contour of the cavity, and disappears as a slender tube near the base; it lacks the dark lobe at the origin of the embolus found in *M. bellulus* and apparently has no tutaculum. The first pair of legs has no spines on the tibia and metatarsus, and the row of 4 dorsal spines on the femur are all very short. Only one pair from Soledad have been seen, taken by Dr. P. J. Darlington in August 1934.

Genus XYSTICUS C. Koch 1835

Figure 198

Xysticus laticeps Bryant, 1933, p. 178, pl. 3, fig. 25.

Female. Length, 8.3 mm., ceph. 4.0 mm. long, 3.5 mm. wide, abd. 4.5 mm.

Cephalothorax very dark brown with median paler area only faintly shown, head very broad, only slightly narrowed in front of the first coxae; mandibles slightly swollen, very dark brown; sternum brown with a median row of dark spots and scattered dark spots about the margin, coxae light brown, each with two widely separated dark spots; abdomen pale brown, very much faded, showing only a row of dark spots about edge of folium, entire abdomen covered with short, stiff spines, venter pale brown with a pair of curving dark stripes from lung

slits to spinnerets; legs, left legs missing, light brown with a distinct line of darker brown on femora, patellae and tibiae, spines, I pair, tibia, ventral, 7-5, lateral, 0, metatarsus, ventral, 6-5, lateral, 2, IV femur, a pair of dark spots at tip; epigynum with a narrow septum.

Male. Length, 5.0 mm., ceph. 2.5 mm. long, 2.4 mm. wide.

Cephalothorax light brown with two pairs of dark stripes, one on margin from first coxae and the second from the p.l.e. converging slightly and ending at the pair of dark spots near posterior margin, median dark line paired, only slightly narrower than lateral stripes and rather faint, ending at the small dark spot at the thoracic groove, pale areas with scattered dark spots, head very wide and only slightly narrowed in front of first coxae; mandibles dark brown; sternum, mouth parts, coxae and ventral sides of legs pale brown, sternum with scattered dark spots, and each coxa with two dark spots even more distinct than in female; abdomen, median area cream white with five pairs of muscle spots of light brown, a pair of spreading dark brown lateral stripes from dark basal spot which narrow and disappear before reaching spinnerets, posterior half with faint cross lines of brown, sides of alternate cream and brown lines, venter pale with dark stripes very distinct from lung slits to spinnerets; legs brown, I pair, femur longer than cephalothorax, with a broad vague dark stripe, each spine from a dark spot, spines, I femur, 5 short spines on dorsal crest, prolateral, 5-6, tibia, ventral, 2-2-2-2, lateral, 2 on apical half, metatarsus, ventral, 2-2-2, lateral, 2, anterior tarsi and metatarsi pale yellow; palpus, tibia and patella of about equal length, superior tibial apophysis ending in a blunt tip beneath tuctaculum, inferior apophysis protruding from tibia on ventral side, large and extending on palpal organ, ending under the ventral apophysis, tutaculum a slender curved tip at right angles to cymbium, embolus of usual type, inferior apophysis cleft to base, lower division smaller, straight and slender, lighter colored, and two thirds as long as upper section which is straight, black and ends in a sharp point, superior apophysis much larger and heavier, of the usual hammer-shape, and crosses the upper branch of the inferior apophysis, the stem portion thickened, and at base produced in a triangular darkened hump.

Allotype ♂ Cuba; Cienfuegos, San José, 31 July, 1931, (Worley).

♂ Cuba; Soledad, sweeping, 7 August, 1931, (Worley).

♀ Cuba; (Poey).

This species was described from a female from Mobile, Alabama, collected by sweeping, 2 August, 1930 by Dr. W. S. Creighton. Later, W. S. Blatchley caught a female at Dunedin, Florida. The Cuban

female, collected by Poey, has no definite locality and is very dark from age. The species is easily identified by the very broad head, even wider than *Xysticus luctans* Koch, the pair of dark spots on the coxae, and the dark curving stripes on the venter, and in the male by the bifid lower apophysis in the palpus. Franganillo has reported *Xysticus pella* Cambr. a Central American species, from Camagüey. It is not unlikely that it is this species.

Family APHANTOCHILIDAE

Genus MAJELLULA Strand 1932

MAJELLULA PULCHRA spec. nov.

Figures 190, 197

Male. Length 2.7 mm., ceph. 1.8 mm., abd. 1.8 mm.

Cephalothorax dark mottled brown with a transverse pale area between median eyes, with numerous cusps or spinigerous tubercles which in dorsal view appear as bright yellow spots, sides evenly rounded, anterior margin truncate and almost twice as broad as posterior, entire carapace corrugate and each cusp in life probably bearing a stout spine as a few remain, a stout horn between lateral eyes with a cusp on posterior margin bearing a short spine, thoracic groove missing but middle area depressed; eyes, anterior row recurved, a.m.e. small and widely separated, p.l.e. largest of the eight, on a low tubercle at anterior base of horn, separated from a.m.e. by fully a diameter and a half, posterior row parallel to anterior and slightly longer, p.m.e. and a.m.e. subequal, p.l.e. at base of horn on posterior side, p.m.e. nearer to p.l.e. than to each other; quadrangle of median eyes narrower in front and wider than high; clypeus little more than width of quadrangle, protruding, with a spine from a raised base at each lower angle; mandibles dark brown, small, vertical, anterior face with four or five long spines projecting forwards, each from a raised base, fang and fang groove very short, impossible to see if teeth are present; labium dark brown, reduced to little more than a line between maxillae; maxillae dark brown, as long as sternum, basal half heavy and convex, bearing the palpi, distal half much narrower, flat with a few spines near the tip that touches the fang groove; sternum dark brown, heart-shaped, three-quarters as wide as long, widest between II coxae and ending in a round point anterior to IV coxae, IV coxae with a small tubercle on distal half; abdomen oval, almost as broad as long, dorsum flattened,

brown, darker in middle area, with irregular pale marks, the largest, a widely separated pair on posterior half, many small tubercles each bearing a short spine, sides with longitudinal dark stripes, venter gray with scant, short bristles; legs, III right missing, 1-2-4-3, anterior pairs longer, dark brown with irregular flecks of cream, basal half of II, III and IV femora pale, all femora with small granules most numerous on distal half, spines small and inconspicuous; palpus dark brown, very short, patella much swollen and seen from above two-thirds as long as terminal joint, tibia reduced to a ring dorsally but produced in a lateral bifid apophysis, the upper lobe rounded and rests against the cymbium, the lower, longer, with a curved tip that rests against the embolus, palpal organ very simple, embolus rising at tip of the cavity, follows the contour of the cavity and ends as a slender dark line above its origin.

Holotype ♂ Cuba; Soledad, May 1936, (Darlington).

The genus *Majella* was established by O.P. Cambridge in 1896, in the Biol. Centr. Amer., 1, p. 191 for a female from Atoyac, Vera Cruz. The name was preoccupied by Ortmann, 1893, and in 1932, Strand proposed the name *Majellula*. The genus is separated from *Bucranium* Cambr. by the relative position of the eyes of the posterior row. The latter genus was founded on an immature female from the Amazons. In 1895, Simon in the Hist. Nat. Araignées, figured the male palpus of *Bucranium taurifrons*, the genotype. The figure of this palpus is very similar to *Majellula pulchra*, differing only in the bifid apophysis of the tibia. The genus *Majellula* may prove to be a synonym of *Bucranium* as the two are separated by a character that may prove to be of doubtful value in this group. In 1900, F.O.P. Cambridge in the Biol. Centr. Amer., 2, p. 165, placed a second species described by O.P. Cambridge, in the genus *Majella*, stating that it probably was a synonym of the genotype.

Family CLUBIONIDAE

Sub-family CLUBIONINAE

Genus CHEIRACANTHIUM C.L. Koch 1839

CHEIRACANTHIUM FERUM O.P. Cambridge

Cheiracanthium ferum O.P. Cambridge, 1897, p. 228, pl. 29, fig. 8.

Cheiracanthium debile id., ibid., p. 229, pl. 29, fig. 7; F.O.P. Cambridge, 1899, p. 86.

Male. Length, 4.6 mm., ceph. 2.0 mm., abd. 2.7 mm.

Cephalothorax pale yellow, thinly covered with fine hairs, no thoracic groove, anterior margin not much narrowed, cephalic portion only slightly arched; eyes covering almost entire width of head, anterior row straight, subequal and equidistant, posterior row straight, same length as anterior row, p.m.e. nearer p.l.e. than to each other, p.m.e. slightly largest of the eight, lateral eyes almost touching; quadrangle of median eyes slightly narrowed in front and wider than high; clypeus almost wanting below a.m.e.; mandibles vertical, brown, much darker at tip, boss present, swollen at base, distal third much narrowed with a narrow black ring at constriction, fang groove oblique, both margins with a fringe of long hairs so that it is difficult to see teeth, fang a simple curve; labium with tip rebordered, sides converging; maxillae more than twice as long as labium with a dense scopula of black hairs at tip; sternum pale, slightly convex, fourth coxae separated by half a diameter; abdomen pale with the usual darker spear-mark at base, thinly covered with short hairs, colulus wanting, inferior spinnerets short and stout, superior pair longer with terminal joint very slender; legs, 1-2-4-3, pale with tips of tarsi very dark, I pair much the longest, spines unpaired, tibia, 5-3, metatarsus, ventral, 1-1 at base, II pair with a very stout obtuse prolateral spine on femur and a much smaller movable spine from a raised base at base of tibia, 1 median spine, metatarsus, 1-1, basal, III and IV metatarsi with group of ventral, distal spines; palpus not quite as long as cephalothorax, tibia longer than patella, tibial apophysis with a slender incurving tip, the interlocking process much longer and broader with reddish obtuse tip curving upward, terminal joint about twice as long as wide, embolus starts on side about midway of bulb, is quickly reduced to a slender black tube which disappears beneath the bulb at margin, starting in center and directed towards the tip is a flattened black piece which broadens distally, with a truncate tip, one corner of which is prolonged in an incurving spine.

♂ Cuba; Soledad, April 1936, (Darlington).

This is much smaller than *Cheiracanthium inclusum* (Hentz). Under the name of *C. debile*, Franganillo has reported *C. ferum* from various parts of Cuba but this specimen is much smaller than the dimensions given for that species. This male has moulted recently, so that it is not easy to distinguish the parts, and it still may be one moult from maturity. *C. inclusum* lacks the black spine or hook at the end of the central piece of the palpus.

CHEIRACANTHIUM INCLUSUM (Hentz)

Clubiona inclusa Hentz, 1847, p. 451, pl. 23, fig. 18.

Cheiracanthium viride Emerton, Trans. Conn. Acad., 1889, 8, p. 184, pl. 5, fig. 12.

Cheiracanthium inclusum, Petrunkevitch, 1930, 31, p. 53, figs. 46-48.

This species is common in the United States, and it has been reported from most of the islands of the West Indies. Both males and females occur at Soledad during July and August.

Genus CLUBIONA Latreille 1804

CLUBIONA ALBICANS (Franganillo)

Figures 199, 200, 202

Corinna albicans Franganillo, 1930, p. 30.

Clubiona albicans, *ibid.*, 1934, p. 32, fig. 16; *ibid.*, 1936, p. 113, fig. 60a.

Female. Length, 6.0 mm., ceph. 2.5 mm., abd. 4.0 mm.

Cephalothorax pale yellow, sparsely covered with short hairs, anterior margin only slightly narrowed, thoracic groove short; eyes, cover almost entire width of head, anterior row straight, equidistant, a.m.e. little larger than a.l.e., posterior row little longer than anterior, slightly procurved, eyes subequal, p.m.e. nearer p.l.e. than to each other; quadrangle of median eyes much narrower in front and wider than high; clypeus less than a diameter of a.m.e.; mandibles vertical, no boss, pale with long hairs, rounded, fang groove oblique, superior margin with a fringe of long hairs and four teeth, the third from base of fang the largest, inferior margin with three teeth followed by three very small ones; labium longer than wide, lateral margin of basal third notched; maxillae almost twice as long as labium, tip dilate; sternum pale, oval, almost twice as long as wide, slightly convex, IV coxae almost touching; abdomen oval, twice as long as wide, flesh colored, sparsely covered with long hairs, venter pale, it is impossible to see the opening of spiracle; legs, 4-1-2-3, pale, anterior tarsi and metatarsi scopulate, spines, I and II pairs, tibia, ventral, 2-2-2, lateral, 0, dorsal, 0, metatarsus, ventral, 2 basal, lateral, 0, dorsal, 0, posterior tibiae and metatarsi heavily spined; epigynum, anteriorly a rounded lobe, followed by a T-shaped groove, each side of which near the base, are coiled tubes beneath the skin as figured.

Male. Length, 4.6 mm., ceph. 2.2 mm., abd. 2.5 mm.

Cephalothorax pale, smaller than female; mandibles pale, sparsely

covered with long hairs, vertical, tip narrowed and fang groove oblique, superior margin with four teeth, the third from base of fang the largest, inferior margin with a very small tooth at base of fang followed by two much larger and two or three very small ones; maxillae more dilate than in the female; abdomen and legs same as in the female; spines, I and II pairs, tibia, ventral, 2-2-2, lateral, 1, dorsal, 0, metatarsus, ventral, 2, basal, lateral, 0; palpus pale, not quite as long as cephalothorax, tibia one and a half times as long as patella, patella with a very long spine at tip, tibial apophysis about as long as diameter of joint, straight, parallel with tarsus, ending in a truncate tip.

Allotype ♂ Cuba; South side of Pico Turquino, 3,000-5,000 feet, June 1936, (Darlington).

♂ ♀ Cuba; South side of Pico Turquino, 3,000-5,000 feet, June 1936, (Darlington).

2 ♀ Cuba; San Jose, 31 July, 1931, (Worley).

♀ Cuba; Soledad, April, 1936, (Darlington).

Franganillo's description was based on a slightly larger specimen than any I have seen. The three pairs of spines on the anterior tibiae, none apical, are unusual in American species. In the males there is one lateral spine on the tibia. The number of teeth on the fang groove is also unusual. F.O.P. Cambridge describes a few species from Central America with three pairs of spines on the first tibia but one pair is apical and very small. *Clubiona crocata* Cambridge has a similar palpus but the tibial apophysis is longer than the tibia.

CLUBIONA CARLOTA spec. nov.

Figure 206

Female. Length, 5.5 mm., ceph. 2.2 mm., abd. 3.2 mm.

Cephalothorax pale brown, cephalic portion darker, thoracic groove distinct; eyes cover more than two-thirds width of head, anterior row straight, a.m.e. slightly larger than a.l.e., separated by a diameter and from a.l.e. by a little less, posterior row little longer than anterior, slightly procurved, p.m.e. largest of the eight, separated by two diameters and from p.l.e. by less; quadrangle of median eyes narrower in front and wider than high; clypeus less than diameter of a.m.e.; mandibles long and slightly swollen at base, no boss; superior margin of fang groove with three teeth, first two small and the third one large, inferior margin with three small subequal teeth, scopula on superior margin only, fang small; labium little longer than wide, lateral margins

at base only slightly excavate; maxillae one and a half times as long as labium, dilated at tip with a broad, convex upper margin; sternum pale yellow, oval, three-quarters as wide as long, fourth coxae separated by a diameter; abdomen yellowish-gray with six pairs of median dark spots on posterior half, and five or six diagonal lines on sides as in *Clubiona excepta* Hentz, venter pale; spinnerets long, posterior pair very long, terminal joint conical; legs, 4-1-2-3, I pair, 5.0 mm. long, pale yellow without markings, spines long, black and conspicuous, I pair, femur, 6 dorsal spines, patella, 0, tibia, ventral, 2-2-2, basal and middle pairs long, lateral, 0, metatarsus, ventral, 2 basal, half the length of joint, scopula on tarsi and metatarsi on I and II pairs, spines on II pair same as on I pair, III and IV patellae with 1 lateral spine, posterior tibiae and metatarsi with many unpaired spines; epigynum large and dark.

Holotype ♀ Cuba; Trinidad Mountains, Mina Carlota, 25 March, 1925, (Salt and Myers).

Paratypes 2 ♀ Cuba; Sierra de Cobre, Loma del Gato, 2,600-3,325 feet, (Bruner).

This species is among those having three pairs of spines beneath the first tibia, but the epigynum is much larger and darker than in *Clubiona albicans* (Frang.) and it differs in the number of teeth on the fang groove as well as in the abdominal markings.

CLUBIONA CRINOPHORA Franganillo

Figure 196

Clubiona crinophora Frang., 1934, p. 32, fig. 17; also 1936, p. 114, fig. 61.

Female. Length, 6.5 mm., ceph. 3.0 mm., abd. 3.6 mm.

Cephalothorax pale, much darker about anterior margin, thoracic groove short; eyes cover four-fifths of head, anterior row slightly procurved, subequal and equidistant, posterior row slightly procurved, little longer than anterior, eyes subequal, p.m.e. little nearer p.l.e. than to each other, quadrangle of median eyes much narrower in front and wider than high; clypeus less than diameter of a.m.e.; mandibles pale brown, vertical, no boss, fang groove oblique, superior margin with row of four minute teeth followed by one large one, inferior margin with four or five minute teeth; labium longer than wide, lateral margins at base excavate, tip narrower than base and rebordered; maxillae twice as long as labium, tip dilate; sternum pale, two-thirds as wide as long, little wider than labium anteriorly and pointed between

fourth coxae; abdomen oval, pale, posterior half with indistinct chevrons, venter pale; spinnerets, superior pair longer than inferior, very slender; legs, 4-1-2-3, pale, tarsi and metatarsi of anterior pairs with iridescent scopula, slight scopula on distal half of tibiae, spines, I and II pairs, tibia, ventral, 2-2, lateral, 0, metatarsus, ventral, 2, basal, lateral, 0, III tibia, ventral, 1-1, serial; epigynum longer than wide, with a faintly lobed dark lip anteriorly, followed by paired, converging, dark convoluted tubes beneath the skin which meet just above the fold, the openings are probably in the last coil, separated by three or four diameters.

♀ Cuba; Trinidad Mountains, Hanabanillo Falls, 30 April 1938, (Darlington).

The type is from the Sierra de los Organos and is a little larger than the specimen described. Also the number of teeth on the two margins of the fang groove does not agree with the description. F.O.P. Cambridge states in the description of the genus in the Biol. Centr. Amer., that the number of teeth is not constant, and often varies between the right and left mandible of the same specimen. According to Simon, Hist. Nat. Araignées, the genus can be divided by the number of ventral spines on the third tibia. The iridescent scopula on the anterior tibiae is quite conspicuous.

CLUBIONA ELAVER spec. nov.

Figure 208

Female. Length, 10.5 mm., ceph. 4.0 mm., abd. 6.0 mm.

Cephalothorax light brown, much darker about anterior portion, long, very little narrowed, thoracic groove distinct; eyes cover more than three-quarters of anterior margin, anterior row straight, eyes subequal, a.m.e. slightly nearer each other than to a.l.e., posterior row longer than anterior, straight, eyes subequal and equidistant; quadrangle of median eyes narrower in front and wider than high; clypeus, less than diameter of a.m.e.; mandibles dark chestnut-brown, hairy, geniculate, boss distinct, fang groove slightly oblique, superior margin with four teeth, inferior with three; labium dark brown, almost twice as long as wide, tip slightly notched; maxillae dark brown, not twice as long as labium, tips much widened; sternum pale, oval, almost twice as long as wide, and pointed in front of IV coxae which are separated by less than a diameter; abdomen dirty white with no markings, sparsely covered with dark hairs of two lengths, venter pale, opening of tra-

cheal spiracle directly in front of spinnerets, colulus present, superior pair of spinnerets slender, twice as long as inferior pair with terminal joint distinct; legs, 4-1-2-3, pale, thinly covered with short, dark hairs, anterior tarsi and metatarsi with a heavy iridescent scopula which is less dense on distal half of tibiae, spines, anterior patellae, 0, posterior patellae, 1 retrolateral, 1 pair, tibia, ventral, 2-2, lateral, 0, dorsal, 0, metatarsus, ventral, 2, basal, lateral, 0, dorsal, 0; epigynum large and dark, as long as wide, with a hairy median septum with a rounded tip that almost reaches the fold, distal half dark, on each side of which are very dark folds and crevices, all heavily chitinized.

Holotype ♀ Cuba; Coast below Pico Turquino, June 1936, (Darlington).

In 1898, O.P. Cambridge, in the Biol. Centr. Amer., 1, p. 238, established the genus *Elarer* for four species that have since been placed in *Clubiona*. It was separated from males of *Clubiona* by the number of spines on the anterior tibiae, three pairs and a single prolateral spine near the base, and by the short but distinct terminal joint of the superior spinnerets. Only one male is known but the three females referred to this genus, have a median hairy lobe in the epigynum. *Clubiona elarer* has the same hairy lobe much longer and heavier than any of the Central American species. The number of spines on the anterior tibiae may be a sexual character. This species is larger than any of the genus reported from Cuba and the epigynum is very distinct.

CLUBIONA JUANA spec. nov.

Figures 201, 203, 204

Female. Length, 6.5 mm., ceph. 2.8 mm., abd. 4.0 mm.

Cephalothorax light brown, much darker about the eyes, thoracic groove short; eyes cover three-quarters of head, anterior row straight, a.m.e. largest of the eight, separated by a diameter and from a.l.e. by about a radius, posterior row longer than anterior, slightly procurved, eyes subequal, p.m.e. separated by more than two diameters and from p.l.e. by less; quadrangle of median eyes narrower in front and not as high as wide; clypeus equal to radius of a.m.e.; mandibles dark brown, slightly swollen at base, no boss, superior margin of fang groove with three teeth, middle one large, inferior margin with four graduated teeth, scopula on superior margin only; labium brown, longer than wide, lateral margins deeply excavate at base; maxillae almost twice as long as labium, tips widened and upper margin almost straight;

sternum pale, oval, three-fifths as wide as long, fourth coxae separated by half a diameter; abdomen light gray at base shading to a dark brown at tip, indistinct chevrons on posterior half, venter pale; spinnerets, anterior pair contiguous, terminal joint short, posterior pair longer and more slender, terminal joint short; legs, 4-1-2-3, pale, I and II pairs with iridescent scopula on tarsi, metatarsi and half of tibiae, spines, I pair, tibia, ventral, 2-2, on basal half, lateral, 0, dorsal, 0, metatarsus, ventral, 2, basal, more than half the length of the joint, lateral, 0, III tibia, ventral, 0, IV tibia heavily spined; epigynum large and dark, with a median basal lobe, very broad and short, below are two parallel, distinct ridges.

Male. Length, 6.2 mm., ceph. 3.0 mm., abd. 4.0 mm.

Cephalothorax pale, much darker about eyes; eyes same as in female; mandibles slightly flattened in front with colorless hairs, fang groove long and oblique; superior margin with one large tooth and one small one, inferior margin with three or four small teeth, scopula on superior margin only; labium longer than wide, lateral margins at base deeply notched; maxillae twice as long as labium; abdomen pale, darker at tip, with indistinct chevrons on posterior half, venter pale; spinnerets, inferior pair contiguous, superior pair longer and more slender; legs, I and II left and III right missing, much longer and more slender than in female; spines on anterior tibiae and metatarsi are much longer, no lateral spines, iridescent scopula on tarsi and metatarsi; palpus, tibia nearly twice as long as patella, tibial apophysis dark with a broad base, the apical third constricted in a point that diverges from the palpus, palpal organ very similar to *Clubiona tricuspidis* Cambridge and *Clubiona portoricensis* Petrunkevitch.

Holotype ♀ Cuba; Soledad, garden, found in a dead banana leaf, 12 August, 1931, (Worley).

Allotype ♂ Cuba; Soledad, 1-11 August, 1934, (Darlington).

Paratype ♀ Cuba; Soledad, February, 1925, (Salt).

Paratype ♀ Cuba; Soledad, 21 July, 1933, (Weber).

The male was not found with the female but is from the same locality, and the difference in the mandibles is probably only sexual. Both have the indistinct chevrons on the posterior half of the abdomen, the labium deeply notched at the base, and the heavy, iridescent scopula on the anterior tarsi and metatarsi. It is related to *Clubiona tigrina* Cambridge from Orizaba, Mexico, and *Clubiona tumivulva* Banks from Costa Rica but is smaller than either of these species. It is larger than *Clubiona portoricensis* Petrunkevitch, and both palpus and epigynum are different.

CLUBIONA MARITIMA L. Koch

Figures 205, 207

Clubiona maritima L. Koch, 1867, p. 310, pl. 12, fig. 198.

Female. Length, 8.0 mm., ceph. 4.0 mm., abd. 4.0 mm.

Cephalothorax pale yellow, dark brown about the eyes, thoracic groove distinct; eyes cover four-fifths of head, anterior row straight, a.m.e. separated by a radius and from a.l.e. by two diameters, posterior row longer than anterior, slightly procurved, eyes subequal and equidistant; quadrangle of median eyes much narrower in front and wider than high; clypeus very narrow, about equal to radius of a.m.e.; mandibles dark brown, distinctly geniculate, no boss, superior margin of fang groove with three teeth, middle one largest, inferior margin with three equidistant teeth, scopula on upper margin only; labium dark brown, twice as long as wide, tip emarginate; maxillae dark brown, one and a half times as long as labium, tips widened to form a distinct angle on outer margin, upper margin oblique; sternum pale yellow, oval, fourth coxae separated by less than half a diameter; abdomen gray, covered with yellowish-white hairs, very slender, venter dark gray; legs, 4-1-2-3, pale yellow, spines black, spines, I and II pairs, tibia, ventral, 2-2, on basal half, long, lateral, 0, dorsal, 0, metatarsus, ventral, 2, basal, half the length of the joint, lateral, 0, dense scopula on anterior tarsi and metatarsi, III tibia, ventral, 1-1, spines, III metatarsus with preening comb; epigynum a long, transverse slit, showing no structure.

Male. Length, 7.0 mm., ceph. 3.5 mm., abd. 3.5 mm.

Paler than female and eye area is hardly darkened; eyes same as in female; mandibles not geniculate, no boss, teeth on fang groove same as in female; legs, spines same, with no lateral spines on tibiae or metatarsi; palpus, patella about as long as broad with a dark ventral lobe at apex, tibia little longer than patella with a broad truncate dorsal apophysis, wider at tip than at middle, tip rests against a prominent lobe or conical swelling on the upper side of the cymbium, the tip of the apophysis is bi-lobed and the outer corner prolonged, two lateral apophyses are parallel, palpal organ fills the entire cavity, embolus a slender inconspicuous black line follows the contour of the cavity and ends in a semicircle at the distal third.

Allotype ♂ Cuba; Soledad, garden, under water lily leaves, 12 August, 1931, (Worley).

♂ ♀ Cuba; Soledad, garden, August, 1931, (Worley).

♀ Cuba; Santiago de las Vegas, Banks Coll.

2 ♂ Cuba; Soledad, 1-11 August, 1934, (Darlington).

♂ Cuba; Soledad, April, 1936, (Darlington).

The type, a female, was from St. Thomas and is in the Keyersling Collection at the British Museum. Petrunkevitch found a female in the Virgin Islands. Undoubtedly it is near *Clubiona crocata* Cambridge from Teapa, Tabasco, Mexico. The latter is figured with a very long embolus and without the two lateral apophyses. The dorsal spur is described "as longer than tibia and deeply bifid at apex." It is even nearer the males of *Clubiona tibialis* Emerton found in New England and to *Clubiona transversa* Bryant from Texas. The females of these three species can be easily separated by the epigynum but the males differ little except in size.

Sub-family ANYPHAENINAE

Genus ANYPHAENA Sundevall 1833.

ANYPHAENA BISPINOSA spec. nov.

Figures 211, 221

Male. Length, 5.0 mm., ceph. 3.0 mm., abd. 2.2 mm.

Cephalothorax pale with dark veins behind eyes which meet and form vague dark stripes that extend near the posterior margin, these stripes are crossed by dark radial striae, slightly emarginate above coxae, thoracic groove short, anterior margin less than half the greatest width; eyes, anterior row straight, almost touching, a.m.e. less than half the diameter of a.l.e., posterior row longer than anterior, straight, eyes subequal and equidistant, separated by less than a diameter; quadrangle of median eyes narrower in front and higher than wide; clypeus less than diameter of a.m.e.; mandibles pale, cone-shaped, fang groove oblique, superior margin with a row of bristles, inferior margin with many minute teeth; labium longer than wide, lateral margins at base excavate; maxillae twice as long as labium, sides parallel; sternum pale, triangular, more than twice as long as wide, ending in a blunt point between IV coxae which are separated by almost a diameter; abdomen oval, pale, heavily spotted with brown, at base a pair of heavy spots and a pair of irregular large spots just behind the middle, venter pale, with a faint median gray stripe, opening of tracheal spiracle one-third nearer fold than to spinnerets; legs, 1-2-4-3, pale, posterior tibiae darker, legs very long, with long

conspicuous spines, II and III coxae modified by a small heavily chitinized hook near tip, the hook surrounded by short hairs with a smooth area to base, I and IV coxae with short, stiff hairs, spines, I and II pairs, femur, 1 long prolateral spine near tip, tibia, ventral, 2-2, lateral, 3, metatarsus, ventral, 2-2, lateral, 3, spines on III pair not modified, metatarsus with a median and distal whorl of spines; palpus longer than cephalothorax, femur slightly enlarged, tibia one and a half times longer than patella, tip of patella heavily chitinized with a long slender spine, tibial apophysis a short triangular lobe against which a chitinized lobe of the tarsus rests, cymbium with two long heavy recurved spines on inner side near tip.

Female. Length, 5.6 mm., ceph. 3.0 mm., abd. 3.2 mm.

Cephalothorax pale with median area from posterior eye row shaded with dark gray, radial striae dark, black lines on margin; eyes same as in male; mandibles pale, shaded with gray, superior margin of fang groove with four teeth, inferior with many small teeth; labium, maxillae and sternum same as in male; coxae not modified but on II and III coxae a small lobe where in male there is a hook; abdomen so thickly covered with brown spots that it appears brown, a pair of basal marks and a larger pair of spots just behind the middle as in male, venter light with pale brown spots, opening of tracheal spiracle one-third nearer the fold than to spinnerets; legs, 1-2-4-3, pale with faint dark rings on all joints, spines, I and II pairs, femur, 1 long prolateral spine near tip, tibia, ventral, 2-2, lateral, 3, metatarsus, ventral, 2-2, lateral, 3, spines on III pair not modified; epigynum more than twice as wide as long, opening a transverse oval, lightly chitinized directly anterior to a pair of bean-shaped sacs, almost touching with tubes extending upward from the exterior ends.

Holotype ♂ Cuba; South side Pico Turquino, 3,000-5,000 feet, June, 1936, (Darlington).

Allotype ♀ Cuba; South side Pico Turquino, 3,000-5,000 feet, June, 1936, (Darlington).

Paratypes 2 ♂ Cuba; South side Pico Turquino, 3,000-5,000 feet, June, 1936, (Darlington).

Paratype ♀ Cuba; Pico Turquino, 6,000 feet, 16-17 June, 1936, (Darlington).

Anyphaena bispinosa belongs to the section of the genus in which the coxae of the male are modified. In the palpus the two large spines at the tip of the cymbium are very conspicuous, as well as the chitinized lobe of the cymbium which rests against the tibial apophysis. The epigynum can be recognized by the broad oval opening just anterior

to the dark bean-shaped sacs beneath the skin. In the Biol. Centr. Amer. most of the females belonging to this group have the epigynum longer than wide.

ANYPHAENA DARLINGTONI spec. nov.

Figures 212, 214, 216, 219

Male. Length, 6.0 mm., ceph. 2.9 mm., abd. 3.0 mm.

Cephalothorax pale yellow with patches of very short gray hairs about the radial striae and anterior to the thoracic groove, anterior margin less than half the greatest width, carapace only moderately rounded; eyes cover two-thirds width of head, anterior row slightly recurved, almost touching, a.m.e. less than half a diameter of a.l.e., posterior row little longer than anterior, slightly procurved, eyes subequal and equidistant, lateral eyes subequal and almost touching; quadrangle of median eyes much narrowed in front and higher than wide; clypeus less than diameter of a.m.e.; mandibles vertical, fang groove short, inferior margin with several very minute teeth; labium nearly twice as long as wide, lateral margins on basal half excavate; maxillae not quite twice as long as labium, base narrow, widened on outer margin to more than twice width at base, with a rounded tubercle that extends outside the plane; sternum pale, oval, ending in a point between IV coxae, anterior margins of II and III coxae thickly covered with fine hairs; abdomen pale, oval, with a few stiff hairs at base, no markings, venter pale, tracheal spiracle slightly nearer fold than to spinnerets, a lightly chitinized recurved line; legs, 1-2-4-3, pale, anterior tibiae and metatarsi darker, posterior tibiae and metatarsi with faint basal, median and distal dark rings, anterior metatarsi and tarsi scopulate, III femur on ventral side with a long, low tubercle near base, thickly covered with short, stiff bristles, metatarsus with distinct cusps on ventral side, most numerous near the base, each bearing a long hair; spines, anterior patella, 1 at apex, 2 lateral, tibia, ventral, 2-2, basal and median, lateral, 3, metatarsus, ventral, 2-2, lateral, 3, all very long, III metatarsus, ventral, 2, basal, and a retrolateral spine more than half the length of the joint, median and distal whorls, the distal whorl is what Petrunkevitch calls the preening comb; palpus about as long as cephalothorax, pale, patella and tibia subequal, a very long spine at tip of patella, tibia with a cluster of bristles about as long as diameter of joint in a slight excavation that is half covered on ventral side by a transparent membrane connected to the ventral spur, palpal organ of the usual type as figured.

Female. Length, 6.5 mm., ceph. 3.1 mm., abd. 3.5 mm.

Cephalothorax pale with the short hairs in four vague lines, anterior margin not narrowed as much as in the male; eyes same as in male; mandibles slightly swollen, inferior margin of fang groove with several small teeth; labium pale, twice as long as wide; maxillae not twice as long as labium, inner margin slightly emarginate, outer evenly rounded with no indication of tubercle found in male; abdomen pale with faint gray marks, in life probably covered with short dark hairs, tracheal spiracle slightly anterior to the middle of the venter; legs, 1-2-4-3, I left missing, pale, posterior tibiae and metatarsi with faint basal, median and distal dark rings, more conspicuous because of dark spines, anterior tarsi and metatarsi with iridescent scopula, anterior pairs spined as in male; III femur with long hairs but no cusps on the metatarsus; epigynum as figured.

Holotype ♂ Cuba; Mountains North of Imias, 3,000-4,000 feet, 25-28 July, 1936, (Darlington).

Allotype ♀ Cuba; Mountains North of Imias, 3,000-4,000 feet, 25-28 July, 1936, (Darlington).

This species is named for Dr. P. J. Darlington. It differs from most of the other species of the genus by the slightly procurved posterior eye row and by the various secondary characters of the male. The modified maxillae, the elongate ventral cone or ridge on the III femur covered with short, stiff bristles, the long hairs from cusps on the metatarsus, and the cluster of bristles on the tibia of the palpus are all distinctive. The unmatched basal pair of spines on the ventral side of the III metatarsus may be found in other species.

ANYPHAENA DIVERSA Bryant

Anyphaena diversa Bryant, 1936, p. 330, pl. 23, fig. 7.

This species is known only from the female found in the Sierra del Cobre. The epigynum is wider than long, the openings are widely separated, anterior to two bean-shaped sacs beneath the skin.

Holotype ♀ Cuba; Sierra de Cobre, Loma del Gato, 2,600-3,325 feet, (Bruner).

ANYPHAENA INSULANA spec. nov.

Figures 193, 210

Male. Length, 4.0 mm., ceph. 2.0 mm., abd. 2.0 mm.

Cephalothorax pale, lightly shaded with gray on radial striae,

thoracic groove short; eyes cover four-fifths of anterior margin, anterior row straight, eyes equidistant, a.m.e. less than one-third diameter of a.l.e., posterior row straight, a little longer than anterior row, eyes subequal and equidistant, lateral eyes separated by less than a radius of a.l.e.; quadrangle of median eyes much narrower in front and higher than wide; clypeus below a.l.e. about half the diameter of a.l.e.; mandibles shaded with gray, with a few long hairs, vertical, fang groove short, two or three teeth on superior margin of fang groove, four or five minute teeth on inferior margin; labium one-third longer than wide, lateral margins on basal half excavate; maxillae nearly twice as long as labium, about twice as long as wide, outer margins with a few stiff hairs; sternum pale, three-quarters as wide as long, ending in a broad lobe between IV coxae, II and III coxae with a chitinized transverse ridge near tip; abdomen pale with the usual gray lines on sides and posterior half with dark gray blotches across the middle, venter pale, openings of tracheal spiracle midway between fold and spinnerets; legs, 1-2-4-3, pale, spines dark, spines, I pair, tibia, ventral, 2-2, lateral, 3, metatarsus, ventral, 2-2, lateral, 3, III pair, tibia, ventral, 1 distal, 2 median, 2 basal, spines not modified; palpus pale, tibia very little longer than patella, (4.0 : 3.0), patella with a very long bristle from chitinized tip, tibial apophysis blunt, joint excavate, below excavation are long dark hairs, and directly below these are short stout hairs, palpal organ of the usual type, two long curved bristles near the tip of cymbium.

Female. Length, 4.0 mm., ceph. 2.0 mm., abd. 2.4 mm.

- Cephalothorax pale with two faint gray stripes from posterior eye row to margin; eyes, mandibles, labium, maxillae and sternum as in the male; II and III coxae not modified; abdomen with same markings as in the male but heavier; legs, III right and IV left missing, pale, with an interrupted dark band on IV tibia, spines, I and II pairs, tibia, ventral, 2-2, lateral, 3, metatarsus, ventral, 2-2, lateral, 3, III tibia, ventral, 1-1 in series and 1 distal, 2 lateral, metatarsus, ventral, 3 whorls, basal, median and distal; epigynum, a pair of transverse bean-shaped dark sacs, almost touching, beneath the skin and just anterior to the fold, from the outer ends are convoluted tubes with openings apparently about the middle of the area, on the outside, above the sacs is a semicircular, clear depressed area faintly outlined.

Holotype ♂ Cuba; Pico Turquino, 6,000 feet, 16-17 June, 1936, (Darlington).

Allotype ♀ Cuba; Pico Turquino, 6,000 feet, 16-17 June, 1936, (Darlington).

The female of this species is very near *Anyphaena diversa* Bryant, known only from the female. In that species, the tubes of the epigynum are a simple curve with the openings at the ends, the light area anterior is very much reduced, and is half covered by a chitinated lobe at the margin. *Anyphaena insulana* is also related to *Anyphaena bispinosa* spec. nov. The males have the III and IV coxae modified, in *A. insulana* with a transverse ridge, and in *A. bispinosa* with a hook and modified hairs. In the male palpus of *A. bispinosa*, the tibia is almost twice as long as the patella and is bare of hair or spines below the tibial lobe, in *A. insulana* the tibia is shorter and below the tibial lobe, the joint is sharply excavate and there are clusters of two kinds of hairs.

Genus ANYPHAENELLA Bryant 1931

ANYPHAENELLA LONGIPES spec. nov.

Figures 213, 217, 220

Male. Length, 4.0 mm., ceph. 2.5 mm., abd. 2.5 mm., I leg, 20.5 mm.

Cephalothorax pale straw-color, eyes surrounded by black rings, nearly as wide as long, cephalic margin less than half the greatest width, thoracic groove short; eyes before the last moult: the right lateral eyes were injured, anterior row slightly recurved, equidistant, a.m.e. smallest of the eight, less than one-third diameter of a.l.e. and separated by a diameter of a.m.e., posterior row procurved, little longer than anterior row, p.m.e. largest of the eight, little more than a diameter apart, and about a diameter from p.l.e., p.l.e. smaller than a.l.e., and separated from them by a radius of p.l.e.; quadrangle of median eyes narrower in front and higher than wide; a.m.e. on margin so that clypeus is wanting; mandibles vertical and rather small, few hairs, fang groove oblique, teeth on superior margin can not be seen because of dense scopula, two minute teeth on inferior margin; labium pale, two-thirds as wide as long, lateral margins on basal half slightly indentate; maxillae not quite twice as long as labium, more than twice as long as wide, sides almost parallel; sternum pale, triangular, widest between II coxae, IV coxae separated by less than a diameter; abdomen pale and slightly crushed, openings of tracheal spiracles nearer fold than to spinnerets; legs, pale and very long, I pair,

femur	patella plus tibia	metatarsus	tarsus	total
5.0 mm.	7.5 mm.	5.5 mm.	2.8 mm.	20.8 mm.

spines, femur, dorsal, 3, lateral, 2, tibia, ventral, 2-2, lateral, 3, metatarsus, ventral, 2-2, lateral, 3, scant scopula on I and II tarsi, III coxae, anterior margin chitinated bearing a row of short bristles and a large patch of spicules, IV coxae slightly roughened; palpus longer than cephalothorax, femur, 1.2 mm., tibia twice as long as patella, 1 very long bristle at tip of patella and a shorter one at base, tibia not as long as terminal joint, 1 long, heavy bulbus spine two-thirds length of joint from a raised base on dorsal side at base, and a small lobe on ventral side just above the base, a thick mass of long hairs from lobe to end of joint; palpal organ very simple with a small spur or tooth beneath the embolus.

Female. Length, 6.0 mm., ceph. 2.5 mm., abd. 3.6 mm.

Coloring, eyes and spines on legs same as in male; legs not quite as long, I pair,

femur	patella plus tibia	metatarsus	tarsus	total
3.5 mm.	4.6 mm.	3.0 mm.	2.0 mm.	13.1 mm.

spines long and overlapping on anterior pairs, a distinct preening comb on III metatarsus; tracheal spiracle slightly nearer fold than to spinnerets; epigynum, openings very lightly defined but apparently widely separated, anterior to a pair of oblong, transverse dark bodies beneath the skin.

Holotype ♂ Cuba; Los Negros, Jiquani, 1913, (Barbour and Shaw).

Allotype ♀ Cuba; Soledad, 10 March, 1925, (Salt).

Paratype ♂ Cuba; Oriente, Yunque de Baracoa, 1,000-1,800 feet, 13 July, 1936, (Darlington).

Paratype ♂ Cuba; Trinidad Mountains, Buenos Aires, 2,500-3,500 feet, 9 May, 1936, (Darlington).

The genus *Anyphaenella* was separated from *Anyphaena* because of the very long anterior legs. Both species originally placed in it, have the tibia of the palpus modified by a long spine or spur at the base on the dorsal side. The spines on the legs are difficult to trace if broken, as they are slender, and the scar is often hard to find.

Genus AYSHA Keyserling 1891

AYSHA GRACILIS (Hentz)

Clubiona gracilis Hentz, 1847, p. 452, pl. 23, fig. 19

Anyphaena gracilis, L. Koch, 1866, p. 195, pl. 8, fig. 130.

Aysha striata, Banks, *nec* Becker, 1909, p. 158.

Aysha gracilis, Bryant, 1931, p. 119, pl. 7, fig. 13, pl. 8, fig. 26.

This species is found from Massachusetts west to Nebraska, and south to Florida.

♀ Cuba; Santiago de las Vegas, (Horne and Houser), Banks Coll.

AYSHA TURQUINENSIS spec. nov.

Figure 209

Female. Length, 7.0 mm., ceph. 3.0 mm., abd. 4.0 mm., I leg 23.0 mm. long.

Cephalothorax pale, in life probably covered with fine short hairs now brushed off except on sides, thoracic groove very short, carapace slightly convex, three-quarters as wide as long, anterior margin less than a quarter of greatest width; eyes cover entire anterior margin, anterior row straight, equidistant, a.m.e. very small, posterior row procurved, longer than anterior, eyes equidistant, p.m.e. slightly larger than p.l.e., lateral eyes subequal and separated by less than a diameter; quadrangle of median eyes much narrower in front and higher than wide; clypeus less than diameter of a.l.e.; mandibles pale with many long hairs, long, vertical, fang groove oblique, four large teeth on superior margin and eight or nine minute teeth on inferior margin, fang rather long and evenly curved; labium pale, one-third longer than wide, tip emarginate and lateral margins on basal half excavate; maxillae about twice as long as wide, lateral margins slightly convex and tips not dilate; sternum pale, three-quarters as wide as long, ending in a hairy lobe between IV coxae; abdomen pale with many short hairs and fewer long hairs, twice as long as wide, venter pale, opening of tracheal spiracle one-fourth nearer fold than spinnerets, colulus present; legs, I right missing, pale, with no markings, anterior tarsi and metatarsi with iridescent scopula, I pair very long, spines, I and II pairs, tibia, ventral, 2-2, lateral, 3, metatarsus, ventral, 2-2, lateral, 2, spines on III tibia not modified; epigynum, a transverse oval depression with lateral margins chitinized, below are transverse tubes, probably twisted, which lead to dark sacs, half way to fold.

Holotype ♀ Cuba; Pico Turquino, 1,500 feet, 25 June, 1936, (Darlington).

Paratype ♀ Cuba; Mountains north of Imias, 3,000-4,000 feet, 25-28 July, 1936, (Darlington).

The position of the tracheal spiracle, and the very long first pair of legs places this species in *Aysha*.

AYSHA VELOX (Becker).

Anyphaena velox Becker, 1879, p. 83, pl. 2, figs. 5-7.

Aysha velox, Bryant, 1931, p. 119, pl. 7, fig. 14, pl. 8, fig. 34.

Originally described from Mississippi, this species has been found in Florida, Bermuda, and Panama. It is evidently very common in Cuba from the number in collections.

♂ ♀ Cuba; Soledad, June, July 1925, (Salt).

♂ ♀ Cuba; Soledad, August, 1931, (Worley).

♀ Cuba; Soledad, San Jose, 1 August, 1931, (Worley).

♂ ♀ Cuba; Havana, Banks Coll.

Genus OXYSOMA Nicolet 1849.

OXYSOMA CUBANA Banks

Figures 218, 222, 234

Oxysoma cubana, Banks, 1909, p. 157, pl. 45, fig. 7.

Aysha tenuis, Banks, *nec* Koch, *ibid.*, p. 158, ♀.

Female. Length, 7.0 mm., ceph. 3.2 mm., abd. 4.0 mm.

Cephalothorax yellowish-brown, quite flat, two-thirds as wide as long, anterior margin less than half the greatest width, abruptly narrowed in front of first coxae, sides evenly rounded, thoracic groove long and sharply defined, three pairs of black spots above the thoracic margin, eyes on black spots; eyes cover three-quarters width of head, anterior row slightly recurved, equidistant, a.m.e. very small, separated by about a radius, posterior row longer than anterior, strongly procurved, eyes subequal, p.m.e. separated by more than two diameters and from p.l.e. by about a diameter and a half, lateral eyes subequal and separated by more than a diameter; quadrangle of median eyes much narrower in front and higher than wide; clypeus below a.m.e. about equals diameter of a.l.e.; mandibles vertical, long, slightly attenuate with many long hairs, fang groove oblique, superior margin with three teeth, inferior margin with two teeth; labium slightly longer than wide, tip rebordered, lateral margins on basal third excavate; maxillae more than twice as long as labium, sides almost parallel, tip not widened; sternum pale, oval, anteriorly narrowed to width of labium, IV coxae separated by half a diameter; abdomen pale yellow, three times as long as wide, venter pale, opening of spiracle about

midway between fold and spinnerets; legs, 4-1-2-3, pale with elongate black spots on dorsal sides, irregularly placed, spines, I pair, patella, 0, tibia, dorsal, 0, ventral, 2-2-2, apical pair small, lateral, 2, metatarsus, ventral, 2, basal pair half the length of the joint, lateral, 0, II pair same as I pair, scopula on all tarsi and metatarsi but much heavier on anterior pairs; epigynum twice as long as wide, openings widely separated.

Male. Length, 6.0 mm.

Coloring same as in female, except that the dark spots on anterior legs are smaller and less numerous; eyes and legs the same as in female; palpus shorter than cephalothorax, tibia about as long as wide and only slightly larger than patella, without dorsal or ventral apophyses, terminal joint longer than tibia plus patella, palpal organ complicated, embolus a slender black tube transverse across the middle and three small apophyses near the tip, one, a transparent lobe that extends outside the cymbium and two black spines that are parallel to the margin, the upper half of the cavity is almost filled with a large leaf-like lobe with a broad, recurved tip under which is a small and very black spine.

Holotype ♂ Cuba; Havana, (Baker), Banks Coll.

Allotype ♀ Cuba; Santiago de las Vegas, (Horne and Houser), Banks Coll.

The genus *Oryzoma* is South American, and apparently all the species are spotted. This Cuban species differs from the genotype by the size of the lateral eyes and the subequal posterior eyes.

Genus TEMNIDA Simon 1897

TEMNIDA PERPUSILLA (Banks)

Figure 215

Anyphaena perpusilla Banks, 1909, p. 158, pl. 45, fig. 9.

Female. Length, 2.6 mm.

Cephalothorax pale, moderately convex, cephalic portion not much narrowed, thoracic groove short; eyes cover about two-third width of head, anterior row slightly recurved, a.m.e. smallest of the eight, less than one half the diameter of a.l.e., separated by about a diameter and from a.l.e. by a radius, posterior row slightly longer than anterior, straight, eyes subequal and equidistant, separated by a full diameter, lateral eyes separated by a diameter of p.l.e.; quadrangle of median

eyes narrower in front and higher than wide; clypeus very narrow, less than diameter of a.m.e.; mandibles reddish-brown, vertical, slightly attenuate, no boss; because of the small size and the many hairs the number of teeth on the fang groove can not be counted, fang short; labium slightly longer than wide, tip rebordered, lateral margins at basal third notched; maxillae more than twice as long as labium, slightly dilate at tip; sternum oval, widest between second coxae, fourth coxae separated by a diameter; abdomen paler than cephalothorax, twice as long as wide, venter pale, opening of tracheal spiracle inconspicuous, midway between fold and spinnerets; legs very pale, 4-3-1-2, spines, I pair, femur, 2 very long dorsal spines, tibia, ventral, 2-2-2-2-2, each from a raised base, long and overlapping, lateral, 0, metatarsus, ventral, 2-2, long and overlapping, lateral, 0, II pair same as I pair except tibia, ventral. 2-2-2-2, few spines on posterior pairs; epigynum, openings widely separated directly anterior to fold, with a triangular median area evidently of coiled tubes.

Holotype ♀ Cuba; Santiago de las Vegas, (Horne and Houser), Banks Coll.

Paratype ♀ Cuba; Santiago de las Vegas, Banks Coll.

Simon founded this genus for two small species from Venezuela. It differs from others in the section by the raised spines on the anterior tibiae and metatarsi, similar to those found in *Phrurolithus*. It is another example of a genus that is restricted at present to Venezuela and Cuba.

Genus WULFILA O.P. Cambridge 1896

WULFILA IMMACULATA Banks

Wulfila immaculata Banks, 1914, p. 640, pl. 43, fig. 7; Petrunkevitch, 1930, p. 85, fig. 72.

This species was described by Mr. Banks from specimens from Vinales, Cuba, Puerto Rico and Mona from the collection in the American Museum of Natural History. A female from Siboney agrees with the original description and the more detailed one given by Petrunkevitch with one exception. The Cuban specimen has on the prolateral margin of the mandibles two or three transverse parallel ridges chitinized from the base for about one-quarter of the entire length. In a recently moulted specimen, these ridges could be easily overlooked as they were not mentioned by Banks or Petrunkevitch,

who had the specimen from Mona. The epigynum agrees with the figures previously given. Franganillo evidently had no new record.

♀ Cuba; Siboney, (Ferrer).

WULFILA TRICUSPIS spec. nov.

Figure 223

Male. Length, 5.0 mm., ceph. 2.0 mm., abd. 3.1 mm.

Cephalothorax pale yellow, three-quarters as wide as long, head very much narrowed, so that anterior margin is less than a third of the greatest width, thoracic groove very indistinct; eyes almost cover the narrow lobe that is carried forward, anterior row recurved, a.m.e. very small, separated by less than a diameter and from a.l.e. by about a diameter, posterior row a little longer than anterior, procurved, eyes subequal, p.m.e. separated by a diameter and a half and from p.l.e. by about a radius of p.l.e.; quadrangle of median eyes very narrow in front and higher than wide; clypeus equals about two diameters of a.m.e.; mandibles pale, small, vertical and weak, no boss, fang groove short, impossible to see teeth; labium white, longer than wide; maxillae white, about twice as long as labium, inner margins parallel, outer margins convex, tips wider than base; sternum white, slightly convex, smooth and shining, heart-shaped, tip extending between IV coxae which are separated by more than a diameter; abdomen white, two and a half times as long as wide, venter white, tracheal spiracle one-third nearer fold than to spinnerets; legs very long, III right and III and IV left missing, pale, 1-2-4, spines, I pair, tibia, ventral, 2-2, lateral, 3, metatarsus, ventral, 2-2, lateral, 2; palpus, white, longer than cephalothorax, tibia slightly longer than patella, patella with two long lateral processes at tip and one dorsal, the retrolateral with a truncate tip, the prolateral as long but ending in a point, the dorsal process much smaller with margins heavily chitinized, tibia curved with a small heavily chitinized apophysis at tip directly below cymbium, palpal organ extends the entire length on cymbium, parts very dark except the embolus at the tip.

Holotype ♂ Cuba; Oriente, Los Llanos, 1,000-2,000 feet, 16-17 July, 1936, (Darlington).

Several species of *Wulfila* have been found in Cuba but most of them are known only from the females. This male is unusual because of the three processes from the patella of the palpus.

Sub-family LIOCRANINAE

Genus LIOCRANUM L. Koch 1866.

LIOCRANUM REMOTUM spec. nov.

Figure 229

Female. Length, 4.0 mm., ceph. 2.0 mm., abd. 2.1 mm.

Cephalothorax chestnut-brown, shining, cephalic portion rather flat, gently rising to thoracic groove where it slopes abruptly to posterior margin, thoracic groove short; eyes, anterior row slightly recurved, a.m.e. slightly smaller than a.l.e., separated by less than a diameter and from a.l.e. by less than a radius, posterior row longer than anterior, recurved, eyes subequal, p.m.e. separated by a little more than a diameter and from p.l.e. by a little less; quadrangle of median eyes narrower in front and higher than wide; clypeus less than diameter of a.m.e.; mandibles dark brown, no boss, vertical, basal half swollen, fang groove oblique, superior margin with three teeth, inferior with two teeth, fang long; labium longer than wide, sides parallel; maxillae but little longer than labium; sternum brown, re-bordered, nearly as wide as long, ending in a short point between IV coxae; abdomen dark gray with four pale chevrons on posterior half, venter pale with a long dark spot in middle and an irregular dark line on sides; legs, II right missing, 4-1-2-3, I pair heaviest, brown, shining, few hairs, spines, I and II pairs, patella, 0, tibia, dorsal, 0, lateral, 0, ventral, 2-2-2-2-2, each from a raised base, long, metatarsus, ventral, 2-2, long; epigynum, area as wide as long, openings probably each side of median septum more than their diameter anterior to the fold.

Holotype ♀ Cuba; Sierra de Cobre, 3,000-3,800 feet, 3-7 July, 1936, (Darlington).

Paratype ♀ Cuba; Sierra de Cobre, 3-7 July, 1936, (Darlington).

Liocranum remota does not agree in every character with the typical species. The median pair of spinnerets are not compressed, but until a male is found, it is thought best to place it in this genus. Franganillo has described *Paratyle montana* from the same area: the description is very short, the genus *Paratyle* has the posterior row of eyes procurved, and only two pairs of spines on the anterior tibiae. No size is given.

Genus PHRUROLITHUS C. Koch 1839

PHRUROLITHUS NEMORALIS spec. nov.

Figures 226, 236

Male. Length, 2.0 mm., ceph. 0.9 mm., abd. 1.0 mm.

Cephalothorax chestnut-brown with a vague gray spot about center, indistinct striae on each side, black between the eyes, five-sixth as wide as long, much narrowed at anterior margin, posterior margin wider than anterior, thoracic groove long and lightly impressed; eyes cover width of head, anterior row procurved, a.m.e. slightly smaller than a.l.e., separated by less than a radius and almost touching a.l.e., posterior row straight, as long as anterior, eyes subequal, p.m.e. white, oval, oblique, separated by less than a radius and from p.l.e. by a little more, lateral eyes separated by a line; quadrangle same width in front and behind, higher than wide; clypeus equal to a diameter and a quarter of a.m.e.; mandibles vertical, with a prominent bristle from a raised base near inner margin directed forward; labium as long as wide, lateral margins slightly notched on basal half; maxillae broad and inclined slightly over labium; sternum triangular, almost as wide as long and very little narrowed anterior to the II pair of coxae, flat, yellowish with a dark margin, IV coxae separated by a diameter; abdomen oval, two-thirds as wide as long, dark brown with no markings, and shining with a coppery iridescence, hairs very small and inconspicuous, venter yellow, shaded with gray, with minute corneous spots; legs, 4-1-2-3, femora dark, I pair darkest, others with distinct lateral stripes, I tibia gray at base, gradually fading at tip, metatarsus and tarsus pale, spines, I pair, all spines from a raised base, tibia, ventral, 2-2-2-2-2, long and overlapping, metatarsus, ventral, 4-3, long and overlapping, II pair, tibia, ventral, 2-2-2-2, metatarsus, ventral, 4-3, no spines on posterior legs; palpus, femur as long as tibia plus patella, with the usual spur directed forward, the tip of spur covered with long hairs, tibial apophysis from near the base, forked, upper branch dark brown, the tip extends to the middle of the bulb, lower branch short, and extends to ventral margin of the tibia, ending in a small incurving hook.

Female. Length, 2.0 mm.,

All characters are the same as in the male, except that the abdomen is larger. The epigynum is very similar to others in the genus, a pair of large dark sacs beneath the skin, separated by less than a diameter with the openings probably beneath a dark angle above.

Holotype ♂ Cuba; Soledad, 1-11 August, 1934, (Darlington).

Allotype ♀ Cuba; Soledad, April, 1936, (Darlington).

The two specimens were taken at different seasons but undoubtedly belong together. The unmarked abdomen, the palpus and the epigynum separate this species from others of the genus. Petrunkevitch described two species, both from females from Puerto Rico. Franganillo has not reported any of the genus.

Sub-family CORINNINAE

Genus CORINNA C. Koch 1842

CORINNA ABNORMIS Petrunkevitch

Corinna abnormis Petrunk., 1930, p. 103, fig. 86.

One male of this species was found by Petrunkevitch in a house at Rio Piedras, Puerto Rico, January 11, 1926. In a small collection of spiders from Siboney, Cuba, received from Victor Rodriguez Ferrer is also a male. The palpus is very characteristic.

CORINNA GRACILIPES (Keyserling)

Hypsinotus gracilipes Keyserling, 1887, p. 448, pl. 6, fig. 19, ♀.

Corinna gracilipes, Bryant, 1933, p. 192, pl. 3, fig. 32, ♂.

The types are in the collection of the Museum of Comparative Zoology. The female is from Haiti and the male from Florida. Petrunkevitch did not find it in Puerto Rico.

♂ ♀ Cuba; Havana, (Baker), Banks Coll.

♀ Cuba; Isle of Pines, 1918, (Barbour and Brooks).

♀ Cuba; Santiago de las Vegas, Banks Coll.

♀ Cuba; Soledad, June, 1925, (Salt).

CORINNA HUMILIS (Keyserling).

Hypsinotus humilis Keyserling, 1887, p. 446, pl. 6, fig. 18; Petrunkevitch, 1930, p. 95, figs. 78, 79.

This species was described from a pair collected at St. Kitts in the collection of the Museum of Comparative Zoology. Petrunkevitch found both sexes in Puerto Rico. Franganillo has not reported it.

♂ Cuba; Soledad, February 1925, (Salt).

♀ Cuba; Pinar del Rio, Herradura, February 1912, (Barbour).

♀ Cuba; Havana, Vedado, June 1927, (Aguayo).

CORINNA PARVULA spec. nov.

Figures 225, 227

Male. Length, 4.5 mm., ceph. 2.2 mm., abd. 2.3 mm.

Cephalothorax reddish-brown, sides roughened, cephalic portion high, very little narrowed, thoracic groove short; eyes cover three-quarters width of the head, anterior row procurved, eyes subequal and equidistant, separated by less than a diameter, posterior row procurved, very little longer than anterior row, eyes subequal and equidistant, separated by more than a diameter; quadrangle of median eyes narrower in front, wider than high; clypeus equals diameter of a.m.e.; mandibles not much swollen at base, boss not well developed, reddish-brown, roughened, with a few long hairs, fang groove oblique, superior margin with three small teeth, a strong scopula from teeth to base of fang, inferior margin with five small teeth, the first and last very small, fang with a thick base; labium brown, tip rebordered, wider than long, lateral margins at basal third notched; maxillae brown, not twice as long as labium, apex not dilate, outer margins evenly rounded; sternum brown, nearly as wide as long, IV coxae separated by half a diameter; abdomen dark gray, almost covered by a scutum which extends on venter but ends do not meet, venter with a broad pale stripe from fold to spinnerets, with a square brown area in middle which may be a ventral scutum, sides dark brownish-gray; legs, I right missing, 4-1-2-3, I pair, femur red-brown, all other joints pale, spines, dorsal, basal, 1, median, 1, prolateral, 1, near tip, patella, 0, tibia, dorsal, 0, lateral, 0, ventral, 2-3, long and slender, not opposite, metatarsus, ventral, 2-2, lateral, 0, II pair, femur, dorsal, basal, 1, median, 1, prolateral, 2, patella, 0, tibia, ventral, 1-2, lateral, 0, metatarsus, ventral, 2-2; palpus not quite as long as cephalothorax, paler than cephalothorax, tibia one and a half times as long as patella, tibial apophysis rather small, lightly chitinized, seen from ventral side it appears as a semi-transparent leaf-like projection, and extends only slightly beyond tibia, bulb semi-spherical, extends beyond plane of palpus, tube within bulb with fewer coils than in *Corinna wheeleri* Petr., embolus from side of bulb near tip, extends across the cavity and ends in an abrupt turn near tip, below embolus and parallel with it, is a dark tooth-like piece which also rises from the bulb.

Female. Length, 5.6 mm., ceph. 2.6 mm., abd. 3.2 mm.

Cephalothorax and eyes same as in male; mandibles geniculate, larger than in male, a deep red-brown, roughened, with scattered long

black hairs, superior margin of fang groove with five teeth, the next to the last the largest; inferior margin with five graduated teeth, fang long and evenly curved; labium brown, wider than long, slightly excavate on basal third; maxillae brown, not twice as long as labium, outer margins rounded, tips not dilate; sternum pale brown, almost as wide as long, IV coxae separated by half a diameter; abdomen an even dark gray, the four muscle spots brown, no scutum, venter paler with no markings; legs 4-1-2-3, pale yellow with I femur darker, spines, I pair, tibia, ventral, 2-3, spines not opposite, rather slender and about the middle of the joint, lateral, 0, metatarsus, ventral, 2-2, lateral, 0, spines on II pair same as on I pair; epigynum very simple, with openings probably in the septum in a slight depression, on each side are large dark sacs beneath the skin.

Holotype ♂ Cuba; Soledad, 1-11 August, 1934, (Darlington).

Allotype ♀ Cuba; Soledad, 4 August, 1931, (Worley).

Paratype ♀ Cuba; Soledad, August, 1934, (Darlington).

This species is smaller than the typical forms, and it differs from most by the few ventral spines on the anterior tibiae. Petrunkevitch described two species based on males from Puerto Rico. These are both larger than *Corinna parvula* and neither have a scutum on the dorsum. Simon described seven species from St. Vincent, all much larger. The coil in the bulb of the male palpus is probably specific.

Genus TRACHELAS L.C. Koch 1866

TRACHELAS BICOLOR Keyserling

Figures 224, 233, 235

Trachelas bicolor Keyserling, 1887, p. 440, pl. 6, fig. 15.

Male. Length, 4.6 mm., ceph. 2.4 mm., abd. 2.6 mm.

Cephalothorax deep red-brown, rugulose, head very high and swollen, sides rounded, thoracic groove deep; eyes, anterior row two-thirds width of head, straight, eyes subequal, a.m.e. separated by less than a diameter and from a.l.e. by almost a diameter and a half, posterior row covers almost entire width of head, strongly recurved, eyes subequal, p.m.e. separated by a diameter and a half and from p.l.e. by two diameters; quadrangle of median eyes narrower in front, as high as space between p.m.e.; clypeus less than radius of a.m.e.; mandibles red-brown, granulose, geniculate, boss poorly developed, outer margins about parallel, with a slight keel on basal fourth, inner

margins emarginate, with a strong keel ending in a blunt tooth midway, distal third more strongly excavate with a sharper keel ending in a blunt tooth, fang groove short, inferior margin with two teeth, fang with a heavy base; labium brown, longer than wide, lateral margins at basal third notched, sides converging; maxillae one and a half times as long as labium, concave on outer side, tips dilate; sternum red-brown, punctate, two-thirds as wide as long, margins carried between coxae, IV coxae separated by less than half a diameter; abdomen pale, covered with short hairs, venter pale; legs, 1-4-2-3, I pair slightly enlarged, little paler than cephalothorax, other pairs a pale yellow, no spines, I pair with a few cusps on tarsus, a double row on metatarsus and scattered cusps on tibia, II pair with two rows on metatarsus and a few on tibia, III metatarsus with a well defined ventral brush at tip, (preening comb of Petrunkevitch), IV metatarsus with a smaller brush; palpus pale, not as long as cephalothorax, from above tibia only slightly longer than patella, with no apophysis, cymbium slender, palpal organ very simple, basal half of bulb protruding from cavity, embolus a very short point from a truncate piece at tip, beneath on side, half hidden, is a long black spine.

Female. Length, 6.4 mm., ceph. 2.8 mm., abd. 4.0 mm.

The female is a little larger than the type. The epigynum is, as Keyserling figured, a pair of very black spots separated by less than a diameter posterior to a pair of depressions, anterior are two spear-shaped bodies beneath the skin, and these are much lighter colored, almost white. In the female from Santiago de las Vegas, the black spots are larger and almost touching, which is probably due to the convexity of the epigynum.

Holotype ♀ Haiti.

Allotype ♂ Cuba Santiago de las Vegas, (Horne and Houser), Banks Coll.

♂ Cuba; Trinidad Mountains, Buenos Aires, 2,500-3,500 feet, 9 May, 1936, (Darlington).

The species was described from a female which is in the Museum collection. The male is smaller than the type, and is closely related to *Trachela lanceolatus* Cambridge from Mexico. In the latter, the outer margins of the mandibles are excavate, and the carina or keel on the outer margin is more curved, lacking the blunt tooth at the middle. Petrunkevitch, Trans Conn. Acad., 1931, 31, p. 109, fig. 90, figures the epigynum of a specimen from Aibonito, Puerto Rico. This may be another species.

Sub-family MICARIINAE

Genus CHEMMIS Simon 1898

CHEMMIS BRUNERI Bryant

Chemmis bruneri Bryant, 1936, p. 331, pl. 23, fig. 9.

Known only from the type, a female from the Sierra de Cobre.

Genus MYRMECOTYPUS O.P. Cambridge 1894

MYRMECOTYPUS CUBANUS Banks

Myrmecotypus cubanus Banks, Trans. Ent. Soc. London, 1926, 74, p. 433, fig. 1; Bryant, 1933, p. 190, pl. 4, figs. 43, 45.

Female. Length, 4.4 mm., ceph. 2.0 mm., abd. 2.4 mm.

Cephalothorax a bright brown with a darker mark in front of the middle, faint radial striae, margin of thoracic portion slightly emarginate, moderately convex, twice as long as wide, anterior margin rounded and twice the width of the posterior, thoracic groove wanting; eyes in parallel rows that cover three-quarters of the head, anterior row straight, equidistant, a.m.e. largest of the eight, separated by more than a radius, a.l.e. about half the diameter of a.m.e., posterior row very little longer than anterior, straight, eyes subequal, p.m.e. separated by fully two diameters and from p.l.e. by a diameter and a half, lateral eyes subequal and separated by fully two diameters; quadrangle of median eyes narrower in front and wider than high; clypeus higher than quadrangle and slightly convex; mandibles vertical, slightly swollen, boss poorly developed, fang groove oblique but short, superior margin with three black serrate bristles near base of fang, followed by a thick scopula, in this are two small teeth, inferior margin with two teeth opposite those on upper margin, fang with a thick base; labium brown, wider than long; maxillae more than twice as long as labium, outer margins parallel, tip truncate with a black margin; sternum brown, convex, five-sixths as wide as long, heart-shaped, IV coxae separated by half a diameter, I coxae brown, others white; abdomen almost black, with scattered white hairs, almost as broad as long, convex, basal scutum extends to middle but does not reach the venter, with a few white scales in addition to the white hairs, venter dark, basal scutum from pedicel to fold; legs, anterior pairs light brown with a pale dorsal stripe on all joints but tarsi, posterior pairs much

darker and stripe not as distinct, no spines on anterior pairs, posterior pairs with a long, median spine on femora, none on other joints; epigynum in ventral scutum, shows no structure but two widely separated depressions which are probably the openings, and equal their diameter from the fold.

Holotype ♂ Cuba; Soledad, 6 March, 1925, (Myers).

Allotype ♀ Texas; Brownsville, (Schaeffer).

♀ Cuba; Cienaga de Zapata, Central Cavadonga, 16 September, 1936, (Davenport).

This species was described from a male and an immature female found with ants. Afterwards an adult female was found in a small collection from Brownsville, Texas. The female from Cuba has recently moulted and is a little longer than the allotype. It has no thoracic groove, the abdomen is not elongate, and because it has recently moulted, the white hairs and scales on the abdomen have not been rubbed.

The genus was erected by O.P. Cambridge in the Biol. Centr. Amer., 1894, 1, p. 123, for one species. In the revision, F.O.P. Cambridge added two more species known only from females. Simon in 1897, places the genus as a synonym of *Apochinomma* Pavesi. F.O.P. Cambridge shows that *Myrmecotypus* is a good genus. In the former, the posterior row of eyes is described as strongly recurved, the sternum attenuate and constricted between the III coxae, and the abdomen almost always depressed dorsally about the middle.

Genus CASTIANEIRA Keyserling 1879

CASTIANEIRA CUBANA spec. nov.

Figures 228, 232

Male. Length, 5.5 mm., ceph. 2.5 mm., abd. 3.0 mm.

Cephalothorax dark chestnut-brown, sparsely covered with white plumose hairs, twice as long as wide, anterior portion attenuate, thoracic groove short and distinct; eyes, anterior row slightly procurved, eyes subequal and equidistant, posterior row same length as anterior, procurved, eyes equidistant, p.m.e. largest of the eight, separated by more than a diameter, lateral eyes separated by a radius; clypeus equal to diameter of lateral eyes; mandibles dark brown,

vertical, inferior margin of fang groove with two teeth; labium wider than long, tip rebordered; abdomen cylindrical, dark brown, scutum covers entire abdomen; in life probably with transverse bands of white plumose scales, of which three near base and three less well marked at tip remain, venter brown with scutum from pedicel to fold and another from fold to near spinnerets, entire venter covered with short, stiff hairs; legs, femora dark brown with scattered white plumose hairs as on cephalothorax, anterior patellae, tibiae, metatarsi and tarsi almost white, posterior pairs with corresponding joints much darker, with scattered white plumose and short dark hairs, spines, I pair, patella, 1 very long trichobothria at tip, tibia, dorsal, 0, 1 very long trichobothria at tip, lateral, 0, ventral, 1-1 median, 1 prolateral above base, at tip a pair of long slender bristles, metatarsus, no dorsal or lateral, ventral, 2-2, median and basal, II pair, tibia, dorsal, 1 very long trichobothria at tip, lateral, 0, ventral, 1-1 median, 1 retro-lateral above base, and at tip a pair of bristles slightly heavier than on I tibia; palpus about as long as cephalothorax, femur dark brown, other joints paler, tibia slightly longer than patella with a large ventral swelling the entire length, palpal organ of the usual type.

Female. Length, 7.3 mm., ceph. 3.3 mm., abd. 4.5 mm.

Cephalothorax, eyes and mouth parts same as in male; abdomen cylindrical, dark brown, scutum very small at base, most of white plumose scales have been rubbed off and only a few remain at base, a long median stripe from end of scutum to tip, widening posteriorly, covered with brilliant golden scales, venter with scutum to fold; legs same as in male but II tibia lacking all spines; epigynum of the usual type, posterior margin rounded and openings separated by about two diameters.

Holotype ♂ Cuba; Soledad, April, 1936, (Darlington).

Allotype ♀ Cuba; Soledad, April, 1936, (Darlington).

Paratype ♂ Cuba; Soledad, April, 1936, (Darlington).

This species is very near to *Castianeira amoena* (Koch) but is smaller and more slender. Both males of *C. cubana* are dark except for the anterior tibiae and metatarsi, while *C. amoena* has the legs entirely yellow. In the palpus the basal portion of *C. cubana* is not as globose as in the American species. The female is much smaller than *amoena*, and the posterior margin of the epigynum is convex rather than concave.

Family SALTICIDAE

Division I. Pleuridentati

Sub-family LYSSOMANINAE

Genus LYSSOMANES Hentz 1844

LYSSOMANES ANTILLANUS Peckham and Wheeler

Figures 230, 237

Lyssomanes antillanus Peckham and Wheeler, 1889, p. 226, pl. 11, fig. 1.

Male. Length, 4.5 mm., without mandibles, ceph. 1.7 mm., long, 1.8 mm., wide, abd. 2.5 mm., mand., 1.2 mm. long.

Cephalothorax yellowish-brown, with bright orange-red plumose hairs about eyes of first row, eye tubercles of second and third rows black, dorsal eye tubercle black, often with a broad darker median stripe including thoracic groove to posterior margin, thoracic groove long; eyes in four rows, first row covering entire width of head, eyes touching, second row slightly wider than first, eyes on tubercles directed slightly outward, third row nearer second than to fourth row, eyes very small, fourth row narrower, eyes subequal with second row and eye tubercles directed backward; eye area covers about two-fifths of carapace; clypeus very narrow, less than half a radius of a.m.e. and covered with red hairs; mandibles long and divergent, two-thirds as long as cephalothorax with two pairs of long bristles or spines interlacing on median margin near base, near apex are three or four graduated spines in an oblique row, superior margin of fang groove with one large tooth near origin of fang, dense scopula on median margin, inferior margin with three equidistant teeth and a very small tooth near base, the first tooth near base of fang largest, recurved and sometimes bifid, the third tooth is the smallest and sometimes is wanting, fang as long as groove and sinuous; labium long; maxillae long and dilate at tip; sternum almost round, IV coxae separated by a diameter; abdomen pale yellow with three pairs of widely separated black dots, venter pale; legs pale yellow with numerous very long spines, no fringe of long hairs on anterior tibiae and metatarsi, first metatarsus bent; palpus longer than cephalothorax, femur curved, tibia little longer than patella, without any special brush of hairs, four times longer than wide, apophysis at tip very small and pressed close to joint, palpal organ about half the length of terminal joint, embolus rather slender with tip bent at right angles towards the center, conductor more con-

spicuous than embolus, with a tooth on inner side, cymbium with a tooth near base above tibial apophysis.

Female. Length, 5.0 mm., ceph. 2.0 mm., abd. 3.0 mm.

Cephalothorax pale yellow with bright orange-red plumose hairs about the eyes of first row and a few below other eye rows, eye tubercles black, dark median stripe usually wanting; eyes same as in male; mandibles pale, very slightly inclined forward with the two pairs of interlaced spines as in the male, a slight swelling above origin of fang, teeth on fang groove smaller than in male, superior margin with three teeth, middle largest, scant scopula near base of fang, inferior margin with six graduated teeth; maxillae, labium and sternum same as in male; abdomen pale yellow with three pairs of faint gray spots widely separated as in the male, venter pale yellow; legs, 1-2-4-3, pale yellow with long spines and no fringe of long hairs; palpi, terminal joint not enlarged; epigynum, a pair of widely separated oval openings anterior to two round dark sacs that are beneath the skin and separated by about a diameter.

♂ ♀ Cuba; Soledad, garden, abundant during summer.

♂ Cuba; Havana, (Cervera).

♂ Cuba; Oriente, Baracoa, Macaguaniua River, 12 August, 1936, (Darlington).

This species was described from a male in the Simon Collection from San Domingo. Cambridge did not find it in Central America, and Petrunkevitch did not have it from Panama, the Virgin Islands, or Puerto Rico. In the collection of the Museum of Comparative Zoology are specimens from Haiti collected by Dr. Mann and identified by the Peckhams. It was found in great abundance by Banks and Worley during July and August at Soledad, and a few specimens were taken there by Salt and Myers during February and March.

The species shows great variation in size, color, and the number of teeth on the fang groove. Often the eye area is black and the color is continued as a broad black stripe to the spinnerets; when this is the case, the mandibles are dark brown and the median half is almost black, also the anterior legs have a faint black line on all joints; again, the oblique row of four or five spines near the tip of the mandibles becomes a mass of short spines, irregularly placed, as by Cambridge, in his figures of *Lyssomanes simplicipes*, *deinognathus* and *mandibulatus*. In this case, the third tooth on the inferior margin of the fang groove is wanting, but the structure of the male palpus is the same in all specimens. All the females I have seen, have been pale and the black is confined to the area around the eye tubercles and to the three pairs of black spots on the abdomen.

Sub-family MYRMARACHNINAE

Genus SYNEMOSYNA Hentz 1845

SYNEMOSYNA SMITHI Peckham

Figures 244, 246

Synemosyna smithi Peckham, 1893, p. 692, pl. 61, fig. 1; Banks, Trans. Ent. Soc. London, 1926, **74**, p. 427, pl. 93, figs. 5, 6.
Synemosyna formica, Banks, *nec* Hentz, 1909, p. 169.

Female. Length, 4.5 mm., ceph. 1.7 mm., abd. 2.7 mm.

Cephalothorax shining chestnut-brown, a short black stripe each side includes the lateral eyes of the first row and the dorsal eyes, a few white hairs about first row of eyes, carapace constricted about midway between anterior and posterior margins, thoracic portion quite globose, then abruptly constricted before the pedicel; palpus white on upper side, dark beneath, terminal joints only slightly enlarged; eyes, eye area covers one-third of carapace, as long as wide, first row strongly recurved, eyes almost touching, a.l.e. about one-third diameter of a.m.e., small eyes nearer the first than third row, dorsal eyes directly behind a.l.e. and on extreme margin of the carapace, slightly larger than a.l.e.; mandibles brownish, small and vertical; maxillae and labium yellowish-white; sternum chestnut-brown, about twice as long as wide, truncate between first coxae and pointed in front of fourth coxae, fourth coxae almost touching, all coxae yellowish-white, fourth coxae and trochanters almost twice as long as anterior; abdomen blackish-brown with a chevron shaped white mark at constriction on dorsal side, venter pale to the constriction, a chitinous plate from pedicel to epigynum extends on sides but does not meet on the dorsum; legs, 4-3-1-2, anterior pairs cream-white, slender, fourth pair, femur almost entirely black with a white spot near base on ventral side, tibia, a broad dark stripe on dorsal side and a broad dark band at base on ventral side, other joints pale, third pair with similar markings but not quite as dark; epigynum a semicircular white area with no structure.

Male. Length, 4.2 mm., ceph. 1.5 mm., abd. 2.6 mm.

Coloring same as in female except that the anterior abdominal band is reduced to a pair of white spots and the white band at constriction does not meet, the abdominal constriction is much deeper, and in addition to the ventral chitinous plate there is a narrow chitinous plate from the epigastric fold beyond the constriction; mandibles much

larger than in the female, no teeth on inferior margin, fang groove slightly oblique, fang long; palpus, femur blackish-brown, patella and tibia cream-white with terminal joint brown, tibia not as long as patella, tibial apophysis as long as diameter of joint and at right angles to joint, tip truncate with one corner ending in a sharp point and the other in a round knob, palpal organ circular and protruding from the cavity, embolus coiled seven times about margin, ending in a very slender tip outside the cymbium.

♂ Cuba; San Antonio de los Baños, 1915, (Barbour and Brooks).

♂ Cuba; Trinidad Mountains, 21 March, 1925, (Salt).

♀ Cuba; Soledad, November, 1926, (Darlington).

♀ Cuba; Mina Carlota, December, 1927, (Creighton).

♂ ♀ Cuba; Soledad, August, 1931, (Banks).

♀ Cuba; Oriente, Boniato Range, Rio Frio, 5 June, 1936, (Darlington).

This species was described from a male and females from St. Vincent. A female co-type is in the collection of the Museum of Comparative Zoology. In the spring of 1925, while at Soledad, Drs. J. G. Myers and G. Salt found this species living with two species of ants. It was described and figured with other myrmecophiles in the Trans. Ent. Soc. London, 1926, 74, p. 427-436, pl. 93. The color varies according to the host. Peckham undoubtedly had the paler form which lives with the ant, *Pseudomyrma flaridula* Sm., var. *pazosi* Smith, and the above description is of the darker variety found with *Pseudomyrma elongata* Mayr, var. *cubaensis* Forel. The species is very similar to *Synemosyna formica* Hentz found in eastern North America, but the West Indian species has rather more slender posterior legs, the male palpus differs in the tibial apophysis. The palpal organ is best shown in Emerton's figures in the Trans. Conn. Acad., 1891, 8, pl. 21, fig. 5.

Sub-family THIODININAE

Genus THIODINA Simon 1901

THIODINA INERMA spec. nov.

Figures 231, 239

Male. Length, 3.8 mm., ceph. 1.6 mm., abd. 2.2 mm.

Cephalothorax chestnut-brown, with eye area a deep yellow; on each side of the thoracic portion are three slender oblique lines of white hairs that start from the margin and disappear before reaching the

dorsal surface, one or two pairs of black lines radiate from the thoracic groove to posterior margin, no white line beneath second and third eye rows, many white hairs about second and third eye rows, cephalic portion high, limited posteriorly by a recurved depression, short thoracic groove in line with posterior margin of p.l.e.; eyes, anterior row recurved so that upper margins form a straight line, a.m.e. three times the diameter of a.l.e., each eye on a distinct collar with a fringe of orange-red hairs, a.l.e. on extreme margin of carapace, second row of eyes narrower than first, and separated from a.l.e. by a diameter and a half of the latter, much nearer to a.l.e. than to p.l.e., dorsal eyes on edge of carapace and a little larger than a.l.e.; quadrangle of lateral eyes twice as wide as long; clypeus about a radius of a.m.e., covered with white plumose hairs directed towards the middle; mandibles dark reddish-brown, vertical, flattened in front and transversely rugose, fang groove short; superior margin with a compound tooth and a row of setae from base of fang to tooth, inferior margin with one small tooth, fang evenly curved, with a very heavy base; labium about as long as wide; maxillae twice as long as labium with a widely dilate tip; sternum pale yellow, oval, longer than wide, (5 : 3), much narrowed between I coxae, widest between II coxae, ending in a point, IV coxae almost touching; abdomen three times as long as wide, dirty yellow with a pair of converging lines of small dark spots from base to spinnerets, sides with scattered elongate black dots, venter dark; legs, 1-4-2-3, I pair heaviest femur, patella and tibia chestnut-brown, ventral side of femur flattened and iridescent, without scales, retrolateral margin with a distinct carina the entire length, metatarsus and tarsus yellow, coxa long, trochanter one-half as long as coxa, patella two-thirds as long as tibia, metatarsus shorter than tibia, spines, femur, dorsal, 2 small spines near tip, patella, 0, tibia, ventral, 2-2, at distal quarter, both pairs less than a third of diameter of joint, 2-2, bulbous hairs near base in a mass of black hairs, the basal pair two-thirds length of joint, lateral, 0, dorsal, 0, II pair not quite as heavy as I pair, femur dark, other joints pale, spines, tibia, ventral, 2-2, not opposite on distal half, 1 median above the base, lateral, 0, dorsal, 0, III and IV pairs with very few spines, all patellae with no spines; palpus not as long as cephalothorax, dark, terminal joint paler, tibia shorter than patella, tibial apophysis forked, superior branch about as long as tibia, rather broad at base and narrowing gradually, inferior branch less than half as long, black, very slender and not sinuate, on ventral side of tibia is a large lobe, palpal organ very simple, embolus near tip, black, long, and sinuous.

Female. Length, 5.6 mm., ceph. 2.0 mm., abd. 3.6 mm.

Cephalothorax yellow, eye area white, eyes on black spots, thoracic portion with four pairs of radiating black lines which do not reach margin or thoracic groove; eyes as in male; mandibles pale yellow, vertical, superior margin of fang groove with a group of small teeth and a row of black setae, inferior margin with one large and one very small tooth opposite the group on the upper margin, median edge with row of black setae the entire length, fang short; maxillae with a dense brush of black hairs at tip; sternum pale yellow; abdomen, median area of cream-white spots bordered by black dots which form converging lines, sides with scattered black dots, venter mottled with white and scattered dark dots; legs, 1-4-2-3, yellowish-white, I pair slightly largest, spines, I femur, dorsal, 1-1 very short near tip, patella, 0, tibia, ventral, 1-1 prolateral on apical third, 1 retrolateral opposite the lower, 2-2 bulbous hairs near base, almost as long as joint, the black bulbous hairs are very conspicuous as the joint is pale, and there is no fringe of black hairs as in the male, the spines are very short and stout, dorsal, 0, lateral, 0, metatarsus, ventral, 2-2, very short, II pair, spines, tibia, ventral, 0, metatarsus, ventral, 2-2, III and IV pairs with very few spines; epigynum a pair of oval openings separated by less than half a diameter, anterior to a deeply bilobed darkened area, beneath the skin, fold is slightly concave.

Holotype ♂ Cuba; Soledad, garden, 15 August, 1931, (Worley).

Allotype ♀ Cuba; Soledad, Garden, 15 August, 1931, (Worley).

Paratypes ♂ ♀ Cuba; Soledad.

Paratype ♂ Cuba; Havana, (Cervera).

Paratype ♀ Cuba; (Parish), Peckham Coll.

Paratype ♂ Cuba; San Antonio de los Baños, (Pazos), 1915.

Paratype ♀ Cuba; Sierra de Cobre, 3,000-3,800 feet, 3-7 July, 1936, (Darlington).

Thiodina inerma can be separated from the two species of the genus found in the United States by the lack of spines on the posterior patellae, the spines on the second tibia, and in the male palpus, by the different proportion of the two branches of the tibial apophysis, also by the carina on the first femur. The unpaired spine on the second tibia is sometimes wanting and the other spines are not opposite. Simon based the genus on spines on the posterior patellae. In this species, the spines are wanting, but the general appearance is very like the two species found in the United States. The female has no spines on the second tibia.

Genus NILAKANTHA Peckham 1901

NILAKANTHA PECKHAMI spec. nov.

Figure 238

Male. Length, 3.1 mm., ceph. 1.5 mm., abd. 1.6 mm.

Cephalothorax golden-brown, iridescent, on each side two narrow lines of white hairs from posterior margin directed towards the thoracic groove, a narrow line of white hairs starting below a.l.e. and parallel to second and third eye rows, cephalothorax broadest behind posterior eyes, posterior margin less than half anterior margin, cephalic portion flat, extends beyond thoracic groove, moderately high, thoracic groove short but distinct; eyes anterior row straight by upper margins, almost touching, a.m.e. three times diameter of a.l.e., p.m.e. very small, nearer a.l.e. than to p.l.e., (1 : 3); p.l.e. not on extreme margin of carapace, p.l.e. and a.l.e. subequal; quadrangle of lateral eyes narrower behind; clypeus concave, less than a radius on a.m.e.; mandibles dark brown, rather small, strongly divergent, fang groove long and oblique, margins poorly defined, no teeth on superior margin, inferior margin with one small tooth near base of fang and three small equidistant teeth near median edge, fang long and sinuous, distal half slender; labium dark brown, wider than long; maxillae twice as long as labium; sternum much narrowed between first pair of coxae, widest between second pair, three-fifths as wide as long, fourth coxae almost touching; abdomen almost twice as long as wide, wider at base, pale, with a pair of heavy dark basal spots that reach the middle, followed by three graduated cross bars on posterior half, spinnerets black, venter dark; legs, 1-2-4-3, I pair heaviest, femur dark, patella and tibia pale on dorsal side and dark on ventral, metatarsus, dark, tarsus pale, patella flattened on dorsal side, II pair marked the same as I pair, III and IV pairs much more slender and paler, spines, I pair, femur, dorsal, 3 short spines near tip, patella, 0, tibia, ventral, 2-2, short spines on distal half, 1 long bristle from a strong socket just above the base, metatarsus, 2-2, longer than diameter of joint, II pair, patella, 0, tibia, 2-2 distal half not opposite, no basal bristle, III pair, patella, 0, tibia, 2-1, IV pair, patella, 0, tibia, 2-2; palpus brown, not as long as cephalothorax, patella longer than wide, tibia half as long as patella, tibial apophysis bifid, upper branch pale, larger and tip pointed, lower branch about half as long as upper, dark, sinuous, ventral apophysis on the tibia directly below bulb is a short downward

curving spine, palpal organ very similar to others of this section with embolus sinuous and rather heavy.

Holotype ♂ Cuba; Soledad, May 1936, (Darlington).

The genus *Nilakantha* (genotype *cockerelli*) was based by Peckham on males and females found at Moneague, Jamaica. The description appeared in his paper "On Spiders of the Family Attidae found in Jamaica," Proc. Zoöl. Soc. London, 1901, pt. 1, p. 8, read, May 7, and published October 1. The genus was separated from *Plcrippus puerperus* (Hentz) by the greater curvature of the anterior eye row and the relatively smaller a.l.e. On May 30, 1901, Simon published that part of the Hist. Nat. Araignées containing this genus, which he ascribes to Peckham as *Nilacantha* and the species as *cockwelli*. The Peckham spelling and definition of the genus must be used, as Simon did not cite a described species. Simon separates the genus from *Thiodina*, which he established the year previous, by the number of spines on the first tibia, 2-1, instead of 2-2, the absence of spines on the second tibia, and the three whorls of spines on the fourth tibia, characters not noted by Peckham in his original description.

Co-types of *Nilakantha cockerelli* Peckham are now before me, and have the first right leg and the left palpus missing; by modern illumination, several points not noted or wrongly noted in the original description, can be seen. The first tibia has two pairs of small spines on the distal half, two pairs of very long and slender bulbous hairs near the base; the second tibia has two pairs of spines, not opposite and no bulbous hairs; on the inferior margin of the fang groove is one tooth near the base of the fang and a group of two or three small teeth near the median edge. This will cause the description and key in the Hist. Nat. Araignées to be modified. The figures given by Peckham in the Pros. Zoöl. Soc. London, pl. 2, figs. 1-1g were probably done by J. H. Emerton. The flat cephalic portion which extends some distance behind the posterior eye row is shown, but the short thoracic groove is not figured.

Nilakantha peckhami is congeneric with *Nilakantha cockerelli*, but differs in the slightly smaller size, the widely divergent mandibles, no bulbous hairs on the first tibia, lack of whorls of spines on the fourth tibia, and the smaller ventral branch of the tibial apophysis. The genus *Nilakantha* undoubtedly will be retained, as both species have a distinct ventral spur or apophysis on the tibia of the palpus, a character not found in any species of *Thiodina*. The presence or absence of bulbous hairs on the first tibia and whorls of spines on the fourth tibia are evidently of specific rather than generic value.

Division II. Fissidentati
Sub-family PECKHAMIINAE
Genus PECKHAMIA Simon 1901.

PECKHAMIA AMERICANA (Peckham).

Synageles americana Peckham, 1892, p. 65, pl. 5, fig. 1.

Peckhamia americana, Peckham, 1909, p. 368, pl. 50, fig. 4, pl. 51, fig. 1.

This is one of the common ant-like spiders found in the southern states. In Florida, it is found with the ant, *Componotus planatus* Rogers, running in files up and down the trees. At Soledad, it is found in the dead banana leaves in the garden during April, May, June, and August. Franganillo reports it from Havana, and it probably will be found with the same ants all over Cuba.

Sub-family HASARIINAE
Genus SILOCA Simon 1902.

SILOCA CUBANA spec. nov.

Figures 242, 243

Male. Length, 3.0 mm., ceph. 1.5 mm., abd. 1.5 mm.

Cephalothorax dark brown, almost black about anterior eye row, eye area pale brown, a wide lateral stripe covered with short white hairs below p.l.e. to posterior margin, thoracic portion very high, anterior margin more than twice the width of posterior, thoracic groove short, starting from a line connecting posterior margins of p.l.e.; eyes, upper margins of eyes of anterior row form a slightly recurved line, eyes contiguous, a.m.e. more than twice the diameter of a.l.e., small eye about midway between a.l.e. and p.l.e., p.l.e. on extreme margin of carapace, a.l.e. and p.l.e. subequal; eye area covers more than two-fifths of carapace; quadrangle of lateral eyes slightly narrower behind than in front and twice as long as wide; clypeus below a.m.e. less than half a radius of a.m.e. and covered with short white hairs; mandibles dark brown, vertical, short, stout, fang groove about horizontal, superior margin with three teeth, the middle the largest, with a row of minute cusps, each bearing a long curved bristle, inferior margin with a bicuspid plate that covers more than half of the margin; labium dark brown, as long as wide; maxillae more than twice as long as labium, distal half pale, upper outer corner produced in a lobe so that width at the tip is equal to two-thirds the length; sternum dark brown,

triangular, as wide as long, widest between II coxae, IV coxae separated by about half a diameter; abdomen with a broad median pale yellow area, bordered by dark stripes that converge towards the center, forming two pairs of dots, one just below the middle and the other above the spinnerets, a narrow lateral pale stripe from base to first pair of dots, center pale with irregular dark dots; legs, 4-3-1-2, I pair heaviest, femur enlarged, yellow with a dark spot on upper side near tip, patella, tibia and metatarsus dark, tarsus pale, spines, I pair, patella, 1 pro-lateral, tibia, ventral, 2-2-2, lateral, 1-1, metatarsus, ventral, 2-2, lateral, 2-2, lateral spines are easily confused with the ventral, II pair not as much enlarged as I pair but coloring and spines are the same, III and IV pairs pale with indications of dark bands on patella and tibia, III tibia and III metatarsus of equal length; palpus rather short, about two-thirds as long as cephalothorax, tip of femur, patella and basal part of tibia covered with a dense mass of long white hairs, patella and tibia of equal length, tibial apophysis about two-thirds diameter of joint, tarsus longer than tibia, flattened at tip and scantily covered with long dark hairs, palpal organ very simple, embolus at tip forms two-thirds of a circle with tip ending outside on the cymbium.

Holotype ♂ Cuba; Soledad, March, 1925, (Salt and Myers).

Paratype ♂ Cuba; Soledad, July 1932, (Bates and Fairchild).

Paratype ♂ Cuba; Pico Turquino, 6,000 feet, 16-21 June, 1936, (Darlington).

Paratype ♂ Cuba; Coast below Pico Turquino, 30 June, 1936, (Darlington).

This species undoubtedly belongs near *Siloca monac* Petrunkevitch from Puerto Rico; but neither his species nor this, agree fully with Simon's description of the genus; Simon describes the palpus with a bulb that extends beyond the cymbium and rests on a lobe of the tibia. The genus was based on two species from Brazil, neither of which are represented in the Collection of the Museum in Comparative Zoology. It differs from the Cuban species of *Agobardus* in the short vertical mandibles and the bicuspid tooth on the inferior margin of the fang groove.

SILOCA MINUTA spec. nov.

Figures 241, 245, 249

Male. Length, 2.3 mm., ceph. 1.3 mm., abd. 1.0 mm.

Cephalothorax black over eye area with posterior margin sharply defined by a curved line which includes the p.l.e. but does not extend to

thoracic groove, black area with scattered white hairs, thoracic portion yellowish, shaded with gray, lateral margins with a wide black line, cephalic portion very high, sloping abruptly a short distance behind p.l.e., thoracic groove very short; eyes, equidistant, anterior row recurved so that upper margins form a straight line, a.m.e. more than twice the diameter of a.l.e., small eyes midway between first and third rows, p.l.e. on extreme margin of carapace, slightly larger than a.l.e.; quadrangle of lateral eyes same width in front as behind; clypeus beneath a.m.e. less than a half a radius of a.m.e., dark with a very few white hairs; mandibles dark brown, vertical, short and stout, superior margin of fang groove with a scant fringe of stiff hairs and two small teeth near median edge, inferior margin with a large bicuspid tooth, fang short and stout; labium pale, wider than long; maxillae pale, very broad with rounded tips; sternum pale, oval, almost as wide as long, widest between II coxæ, IV coxæ touching; abdomen pale yellow with a pair of widely separated lateral stripes which almost meet about middle and continue as converging irregular lines to the tip, sides with irregular gray lines, venter yellow with faint gray marks, the largest and most distinct being a round spot anterior to the spinnerets; spinnerets long; legs, 1-4-2-3, I pair slightly enlarged, all joints except tarsus dark gray, covered with dark hairs, femur flattened laterally, prolateral side iridescent black, tibia longer than metatarsus, spines, patella, 1 prolateral, tibia, ventral, 2-2-2, long and overlapping, prolateral, 2, metatarsus, 2-2, long and overlapping, prolateral, 2, II, III and IV pairs pale yellow, IV tibia shorter than metatarsus, tibia and metatarsus with dorsal spines; palpus shorter than cephalothorax, femur dark at base, distal half white and covered with white hairs, tibia shorter than patella, dark, tibial apophysis pressed close to terminal joint, triangular with a curved tip, palpal organ with embolus at tip forming almost a circle, bulb does not extend on tibia.

Female. Length, 3.0 mm., ceph. 1.6 mm., abd. 1.5 mm.

Cephalothorax, eye area black with a deep notch on posterior margin which does not extend to thoracic groove, very few white hairs, between the eyes is a scant fringe of long hairs above the anterior eyes, thoracic portion brown shaded with black near posterior margin, sides almost parallel, thoracic groove very short with anterior end on line drawn between posterior eyes, thoracic portion slopes abruptly to posterior margin a short distance from groove; eye area covers about one-third of carapace, upper margins of eyes of anterior row form a straight line, a.m.e. more than twice as large as a.l.e., small eyes about midway between first and third rows, dorsal eyes on margin of cara-

pace, slightly larger than a.l.e.; quadrangle of lateral eyes as wide in front as behind; clypeus almost wanting below a.m.e.; mandibles vertical, short and stout, superior margin of fang groove with two small pointed teeth, scapula composed of a few, long stiff hairs, inferior margin with a large bicuspid tooth nearly opposite the teeth of upper margin; labium wider than long, much narrower at tip than at base; maxillae slightly inclined towards labium, with rounded tip and almost parallel sides; sternum pale, oval, widest between II coxae, IV coxae almost touching; abdomen rather shrunken, very dark gray with a basal median pale stripe which widens and terminates before the middle, faint traces of cross lines on posterior half, entire abdomen covered with long coarse hairs, venter pale from pedicel to fold, thence heavily mottled with black to spinnerets; legs, 4-3-1-2, pale with a few dark hairs, I and II femora with a large black ventral spot that extends on prolateral surface, I pair very slightly enlarged, tibia longer than metatarsus, IV tibia shorter than metatarsus, spines, I pair, patella, prolateral, 1, tibia, ventral, 2-2-2, middle pair half as long as joint, prolateral, 1, metatarsus, ventral, 2-2, basal pair as long as joint, prolateral, 2, retrolateral, 2 posterior tibiae and metatarsi with paired dorsal spines, palpi pale, with terminal joint black; epigynum rather large, clear, with a pair of circular darkened areas near base, and anterior is a pair of dark spots which are probably the openings and lead to the darkened areas.

Holotype ♂ Cuba; Soledad, 1-11 August, 1934, (Darlington).

Allotype ♀ Cuba; Soledad, 20 July, 1933, (Weber).

Paratypes ♂ ♀ Cuba; Soledad, 1-11 August, 1934, (Darlington).

Paratype ♀ Cuba; Soledad, May, 1936, (Darlington).

Paratype ♀ Cuba; Coast below Pico Turquino, 30 June, 1936, (Darlington).

Paratype ♂ Cuba; Sierra de Cobre, 3,000-3,800 feet, 3-7 July, 1936, (Darlington).

The generic position of this species is uncertain. The teeth on the fang groove are the same as in *Siloca monae* Petrunkevitch from Puerto Rico, but the number of lateral spines on the anterior tibiae and metatarsi do not agree with the definition of the genus or the Puerto Rican species. The epigynum is very similar to *Stoides pygmaea* (Peckham) from St. Vincent, which has a single tooth on the inferior margin of the fang groove but the cephalothorax is not as broad. The male differs from that of *Siloca cubana* by the smaller size, and in the palpus the tibia is shorter than the patella. The two species from Cuba and the Puerto Rican species have the palpal organ very similar. The white hairs on the male and female palpi are very conspicuous.

Genus *SIDUSA* Peckham 1895.*SIDUSA INCONSPICUA* spec. nov.

Figure 250

Female. Length, 4.5 mm., ceph. 2.0 mm., abd. 2.5 mm.

Cephalothorax, eye area black, with scattered white hairs, narrow median pale stripe from thoracic groove to posterior margin, sides on posterior half gray, recurved depression behind posterior eye row, thoracic groove short but distinct, cephalic portion high, thoracic portion falls abruptly from a point behind the p.l.e.; eyes, anterior row form a slightly recurved row by the upper margins, a.m.e. twice diameter of a.l.e., eyes almost touching, small eyes nearer p.l.e. than to a.l.e., p.l.e. not on extreme margin of carapace, larger than a.l.e.; quadrangle of lateral eyes narrower behind; clypeus below a.m.e. less than half a radius of a.m.e. with no hairs or scales; mandibles brown, vertical, with no hairs, fang groove horizontal and short, superior margin of fang groove with two teeth, inferior margin with one large tooth, a diagonal row of hairs on the inner surface of mandible, fang short and evenly curved; labium longer than wide, tip evenly rounded; maxillae about twice as long as labium and slightly inclined; sternum a broad oval, first coxae separated by a little more than width of labium, fourth coxae almost touching; palpi, femur pale, other joints brown, with a fringe of stiff black hairs on prolateral side of last joint; abdomen oval, dark gray, in life probably covered with short hairs as a few remain near the base, dorsum slightly rounded, a narrow pale median stripe to the first muscle spots, remainder of dorsum covered with small pale spots which on posterior half are arranged as chevrons, sides dark gray; legs, left I and II missing, 4-3-1-2, ventral sides of femora dark, interrupted dark rings at tip of patellae, base and middle of tibiae, III patella plus tibia not as long as IV patella plus tibia, spines, I pair, patella, 0, tibia, dorsal, 0, ventral, 2-2-2, lateral, 2, metatarsus, dorsal, 0, ventral, 2-2, lateral, 2, II pair, patella, 0, tibia, dorsal, 0, ventral, 2-1-1, lateral, 2, metatarsus, ventral, 2-2, lateral, 2, III pair, patella, 1-1, tibia, scattered, metatarsus, apical whorl, IV pair, patella, lateral, 1-1, tibia, dorsal, 1 at base, metatarsus, apical whorl; epigynum, directly above the fold are two large dark sacs beneath the skin, separated by less than half a diameter, anterior to these are two small pale areas, a pair of dark dots between the pale and dark areas are probably the openings.

Holotype ♀ Cuba; Trinidad Mountains, Buenos Aires, 2,500-3,500 feet, 9 May, 1936, (Darlington).

Franganillo has given a very brief description of his *Menemerus fasciculatus* as having an abdomen thickly covered with minute clear spots. Probably the spots are hair pits as is the case with all the described species, but since *Menemerus* has a very low and flat cephalothorax, while *Sidusa inconspicua* is high and rounded, it is hardly probable that the two are the same species. *S. inconspicua* is separated from *S. turquinensis* by the epigynum and by the presence of a dorsal spine at the base of the IV tibia.

SIDUSA TURQUINENSIS spec. nov.

Figures 240, 248

Male. Length, 4.4 mm., ceph. 2.1 mm., abd. 2.3 mm.

Cephalothorax very dark brown, with scattered white hairs and scales, most numerous about thoracic depression, a few yellow hairs about anterior row of eyes, cephalic portion high, recurved depression posterior to dorsal eyes, thoracic groove short, starting from the depression, thoracic portion slopes gradually from the depression half way to posterior margin, then slopes abruptly, sides only slightly rounded on thoracic portion; eyes, anterior row recurved, so that upper margin of a.m.e. and lower margin of a.l.e. form a straight line, equidistant, a.m.e. almost twice the diameter of a.l.e., a fringe of orange hairs above eyes, small eyes midway between first and third rows, dorsal eyes not on extreme margin, subequal with a.l.e.; quadrangle of lateral eyes as wide behind as in front; clypeus below a.m.e. hardly more than a line, with no hairs or scales; mandibles dark brown, vertical, flat, fang groove slightly oblique, superior margin with two sharp teeth at median edge, inferior margin with one large sharp tooth nearer base of fang than tooth on the upper margin, fang quite long; labium dark brown, tip rebordered and pale, as long as wide; maxillae pale brown, more than twice as long as labium, slightly inclined, tips widened but upper corner scarcely prolonged in a lobe; sternum very dark brown, slightly iridescent, more than two-thirds as wide as long, widest between II coxae and pointed in front of IV coxae, IV coxae touching; abdomen dark brown, with a pale spear-mark on basal half, followed by a pair of dark spots and a transverse bar above spinnerets; sides with pale longitudinal lines, in life probably covered with iridescent scales as a few remain on the sides, venter almost black with lateral pale stripes

meeting in front of spinnerets, each side of spinnerets a distinct black spot; legs, 4-1-2-3, I pair pale brown except for tarsus, femur slightly enlarged, flattened laterally, patella and tibia with a ventral brush of black hair, spines, patella, prolateral, 1, tibia, dorsal, 0, ventral, 2-2-2, prolateral, 2, all less than diameter of joint, metatarsus, ventral, 2-2, basal pair more than half the length of the joint, lateral, 0, II pair, femur pale, other joints darker, brush of dark hair beneath patella and tibia not as heavy as on I pair, spines same as on I pair, III and IV femora pale, other joints darker, spines, patellae, 1-1, III metatarsus distal whorl, IV metatarsus, distal and median whorls, IV tibia, no dorsal spine at base; palpus about as long as cephalothorax, femur, patella and tibia white and covered with long white hairs, seen from above, tibia more than two-thirds as long as patella, tibial apophysis about as long as diameter of joint, with a very slender curving black tip, terminal joint longer than tibia plus patella, palpal organ extending in a large lobe on ventral side of tibia, embolus at tip curves in a semi-circle and ends slightly outside cavity, prolateral margin of cymbium with a fringe of coarse black hair.

Female. Length, 5.5 mm., ceph. 2.1 mm., abd. 3.1 mm.

Cephalothorax and eyes same as in male; mandibles vertical with a sharp tooth on inferior margin as in male; maxillae not prolonged on upper outer corner as in male; sternum pale but the same shape as in male; abdomen pale brown with a pale median stripe about one-third the width of abdomen extending beyond the middle, and ending in a truncate bar followed by a dark chevron, each side of pale stripe about middle is a dark spot, these two dark spots and the dark chevron can be traced in the male, venter pale with a pair of widely separated lateral stripes that do not reach the spinnerets or the fold, spots each side of spinnerets larger than in the male; legs, 4-1-2-3, pale, posterior pairs with indistinct dark rings on tibiae and metatarsi, I pair heaviest, femur slightly enlarged, spines, patella, prolateral, 1, tibia, ventral, 2-2-2, lateral, 0, metatarsus, ventral, 2-2, basal pair more than half the length of joint, distal pair more than diameter of joint, lateral, 0, II pair tibia, ventral, 2-2-1, lateral, 0, III and IV patellae, lateral, 1-1, IV metatarsus with distal and median whorls, IV tibia with no dorsal spine at base; epigynum, a pair of circular depressions almost touching on median line, posterior to the depressions are two pairs of dark sacs, the lower pair almost touching, a pair of dark spots at lower end of anterior pair probably indicate the openings.

Holotype ♂ Cuba; Pico Turquino, 6,000 feet, 16-21 June, 1936, (Darlington).

Allotype ♀ Cuba; Pico Turquino, 6,000 feet, 16-21 June, 1936, (Darlington).

Paratype ♀ Cuba; Pico Turquino, 6,000 feet, June, 1936, (Darlington).

Paratype ♂ Cuba; Soledad, May 1936, (Darlington).

Paratype ♀ Cuba; Mountains North of Imias, 3,000-4,000 feet, 25-28 June, 1936, (Darlington).

This species has been placed in the genus *Sidusa* as it is defined by F.O.P. Cambridge in the Biol. Centr. Amer., 1901, **2**, p. 196. It is also close to those American species of *Habrocestum*, which Peckham (1909) states do not agree with the European species of the same genus. It is evidently related to *Saitis* (?) *inutilis* Peckham, (1901) from Jamaica, but differs in the tibial apophysis of the palpus and in the spines on the posterior legs. Cambridge places in the genus *Sidusa*, all species with the embolus of the palpus confined to the distal fourth, and he does not distinguish between a sharp conical tooth or broad cusp on the inferior margin of the mandibles. From the number of specimens seen, the presence or absence of the dorsal spine at the base of the IV tibia is constant in this species. The male paratype from Soledad is much smaller than the holotype from Pico Turquino, and the first pair of legs lack the ventral brush of dark hair on the patella and tibia, but the palpus and the arrangement of spines is the same.

Sub-family MAEVIINAE

Genus METACYRBA F.O.P. Cambridge 1901

METACYRBA TAENIOLA (Hentz)

Attus taeniola Hentz, 1846, p. 353, pl. 21, fig. 5.

Metacyrba taeniola, Peckham, 1909, p. 486, pl. 39, fig. 5, pl. 40, fig. 4.

This species is fully described and figured by Peckham. It is found from New York to Wisconsin and south to Mexico. As Peckham points out, the number of spines on the first tibia is very variable. In the Cuban specimens only one small spine is found.

♀ Cuba; Jiguani, Los Negros, February 1913, (Barbour), Peckham identification.

3 ♂ Cuba; Soledad, quarry 30 July, 4 August, 1931, (Worley).

Genus *BALMACEDA* Peckham 1894*BALMACEDA PECKHAMI* spec. nov.

Figures 247, 251

Female. Length, 4.2 mm., ceph. 1.9 mm., abd. 2.5 mm.

Cephalothorax moderately high, chestnut brown, black about eyes, white scales in a thick mass between eyes and on sides, no thoracic groove or depression behind dorsal eyes, and widest behind them, thoracic portion continuing on same level as cephalic until near the posterior margin when it slopes abruptly, sides rounded; eyes, anterior row straight by upper margins, equidistant, a.m.e. separated by less than half a radius, more than twice the diameter of a.l.e., small eyes nearer a.l.e. than to p.l.e., a pair of rod-like bristles below each a.l.e., dorsal eyes not on margin of carapace and subequal with a.l.e.; quadrangle of lateral eyes as wide in front as behind and covering more than a third of the carapace; clypeus retreating and almost wanting below a.m.e.; mandibles vertical, dark brown, superior margin of fang groove with two small teeth, and a row of setae between teeth and the base of fang, inferior margin with a large bicuspid tooth, fang short and evenly curved; labium dark brown, twice as long as wide; maxillae dark brown, almost twice as long as labium, tips rounded and slightly dilated; sternum dark, oval, narrowed between I coxae to width of labium, twice as long as wide, widest between II coxae, rounded posteriorly, IV coxae contiguous; palpi cream-white with conspicuous black spots at tips of femur, patella and tibia, terminal joint not enlarged; abdomen with a wide median dark stripe indented at muscle spots, in life evidently covered with white scales as a few remain on sides, sides with diagonal white and dark lines, venter dark; legs, 4-3-1-2, I pair enlarged, dark chestnut-brown with scattered white scales on femur, patella and tibia, I coxae largest, dark, trochanter about one-third length of coxa, femur flattened laterally, with a few clavate bristles beneath, tibia enlarged, metatarsus and tarsus pale, spines, femur, dorsal, 3 long heavy spines in series, patella, 1 small prolateral spine, tibia, ventral, 2-2-2, basal pair not opposite, those on prolateral side, longer but not equal to diameter of joint, first spine about one-third distant from base, lateral, O, dorsal, O, metatarsus, ventral, 2-2, basal pair long, lateral, O; II, III and IV pairs pale yellow, femora with long dorsal spines, no spines on patellae, very few on tibiae and metatarsi, IV tibia longer than IV metatarsus, IV tibia with 1 basal spine and 1-1 at tip as in female *Hentzia*; epigynum

very simple, anterior to the epigastric fold is a pair of circular depressions, separated by less than one-half a diameter.

Holotype ♀ Cuba; Soledad, February 1925, (Salt and Myers).

The generic position of this species is uncertain. *Balmaceda pieta*, the genotype, now in the collection of the Museum of Comparative Zoology, has three pairs of heavy spines beneath the first tibia base slightly raised prolateral spines and there are rod-like bristles beneath the a.l.e. Peckham does not mention them in his description nor are they figured in the drawing of the entire spider; also both male and female have a short thoracic groove in a depression. In the *Histoire Naturelle des Araignées*, 2, p. 846, fig. 999, Simon figures the cephalothorax of *Balmaceda variegata* Simon from Pará, with the rod-like bristles beneath the a.l.e., usually associated with the female *Hentzia*, and in the description of the genus, he uses this as a generic character, but it is very probable that he knew the genotype only from figures and the description.

Balmaceda peckhami can not be placed in the genus *Rudra* found in Central America and Brazil, for in that genus the cephalothorax is low and flat, the sides are almost parallel, and the eyes cover only about a fifth of the cephalothorax, the tibial spines are very heavy and are from a raised base. Because of the teeth on the fang groove, the arrangement of spines on the first tibia, and of the few spines on the III and IV pairs of legs, it might be placed near *Hentzia*, but because of the enlarged first tibia and the very different type of epigynum, it must be put in another section. It is evidently closely related to *Balmaceda variegata* Simon. However, it is thought best to place it in that genus until the West Indian Salticidae are better known since so many genera have been described from one sex.

Sub-family ZYGOMALLINAE

Genus AGOBARDUS Keyserling 1884

Agobardus Keyserling, 1884, p. 519.

Commoris Simon, Ann. Soc. Ent. Belgique, 1902, 46, p. 382.

Emathis Petrunkevitch, 1930, p. 118, nec Simon.

The genus *Agobardus* was based by Keyserling from on specimens sent him from the Museum of Comparative Zoology with the locality label "U.S." There was but a single species, *Agobardus anormalis*. Afterwards he sent two females to Peckham. These were described in his "Attidae of North America" 1909, and at the end of the descrip-

tion, Peckham states that Banks is probably correct in his assumption that they come from the West Indies. Within a few years the species has been found in Haiti by Darlington and Bates, so it is not improbable that the original specimens were collected by Uhler in Haiti many years ago and the labels were lost or mixed. The greater part of the collection made by Uhler in Haiti was sent to Keyserling and described by him in the *Verhandlung*. The types were returned and are now in the Museum of Comparative Zoology.

In 1902, Simon based the genus *Commoris* on a species from Guadeloupe. Later, Peckham identified the same species from Dominica and it was figured by Mr. Emerton; a short description was published by Dr. Petrunkevitch in "Attidae of the Yale Dominica Expedition", *Journ. N. Y. Ent. Soc.*, 1918, **22**, p. 329, pl. 12, figs. 1-3. *Commoris* was placed by Simon in the section *Hasariæ*, a section that has a high cephalic portion, mandibles vertical and parallel. The fang groove is rather short, the superior margin with two teeth, the inferior margin with one tooth, divided in two equal points in the male but unequal in the female; the maxillae are rather long and broadly rounded on the outer side.

Petrunkevitch, in his "Spiders of Porto Rico," places very similar spiders in *Emathis*, which belongs in the section next to *Hasariæ*. The character used to separate the two sections is the broad denticulate plate on the inferior margin of the fang groove which is divided in several denticles or teeth. The number often varies on the right and left margins and is consequently an unsatisfactory character. The genus *Emathis* is East Indian, and in a specimen of the genotype, *Emathis weyersi* in the Museum of Comparative Zoology Collection, the mandibles are vertical and rather small, fang short, the first leg not enlarged and with no modifications; the palpus is short and the tibia not as long as the diameter of the joint, but the palpal organ is relatively large, all characters not found in West Indian species. It is therefore evident that the West Indian species referred to that genus have been wrongly placed.

In the *Histoire Naturelle*, 1903, **2**, p. 780, fig. 935, the mandibles figured as *Commoris enoplognatha* are probably of some other species because a large spur is shown on the median margin quite near the base, and no tooth or carina is shown on the outer margin. In the original description there is no mention of a spur.

So long a time has elapsed since the genus was described by Keyserling that it is thought well to give a new description:—

Cephalic portion very high, lateral margins rounded, crescent-shaped

depression posterior to dorsal eyes, thoracic portion falls abruptly from midway between groove and posterior margin, thoracic groove very short, starting from the depression; anterior row of eyes strongly re-curved, small eyes midway between first and third rows, dorsal eyes not on extreme edge of carapace; mandibles large and divergent in some males, and vertical in females and small males, fang groove long with a large more or less divided tooth on the inferior margin, fang long and sinuous; maxillae in male often prolonged in a lobe on upper outer side; first leg longest, and in male, femur often enlarged and modified by a spur or a carina on ventral side; basal spines on first metatarsus very long, fourth metatarsus with distal whorl; palpus as long as, or longer than cephalothorax, the palpal organ not resting on the tibia.

The genus is confusing as there are often two forms of males, the larger with porrect mandibles, and the first pair of legs usually heavier. In the smaller form, the mandibles are small as in the female, but there are the same modifications as found in the larger forms. Five of the six species from Cuba have the palpus longer than the cephalothorax.

Franganillo has described two species of *Emathis* from Cuba. One, *Emathis cubensis*, has been identified, but the second is stated to have a single spine on the first tarsus and has not been seen by me. Possibly it does not belong to the genus *Agobardus*.

In three of the six species of *Agobardus* from Cuba, the males have a distinct chitinous lobe over the opening of the spiracle. Keyserling did not find it in the genotype, *Agobardus anormalis*. The first notice of this lobe is by O.P. Cambridge in his description of the genus *Menalippe* in the Biol. Centr. Amer., 1898, 1, p. 284, a genus since placed as a synonym of *Chemmis* by later workers. Dr. Chickering has noted the same lobe in five species of Clubionidae from Panama, described by a him in 1937. So far it has been found only in the males.

Key for *Agobardus* males

- 1 Mandibles with long sharp tooth on median margin 2
 Mandibles without a tooth on median margin 4
- 2 Mandibles with a short cusp on outer margin opposite the long
 tooth *keyserlingi* spec. nov.
 Mandibles without a cusp on outer side 3
- 3 Distal two-thirds of fang groove deeply excavate . . *cubensis* (Frang.)
 Basal third of fang groove excavate *mandibulata* spec. nov.

- 4 Cephalothorax with swelling below lateral eyes, mandibles with pronounced carina from base to fang ending in a tooth.....
 *prominens* spec. nov.
 Cephalothorax with no swelling below lateral eyes.....5
- 5 Mandibles divergent with a fringe on outer margin.....
 *fimbriata* spec. nov.
 Mandibles vertical with no fringe on outer margin.....
 *mundus* spec. nov.

AGOBARDUS CUBENSIS (Franganillo)

Figures 252, 253, 256

Emathis cubensis Franganillo, 1934, no. 107, fig. 28; id., 1936, p. 129, fig. 72.

Male. Length, 5.5 mm., ceph. 2.6 mm., abd. 3.0 mm.

Cephalothorax a very dark brown, a patch of white hairs below p.l.e., a smaller white patch midway between thoracic groove and posterior margin, and a wide lateral stripe of white hairs on thorax, head high, sides evenly rounded, anterior row of eyes carried forward, crescent-shaped depression posterior to dorsal eyes from which the thoracic groove starts, thoracic portion slopes gradually from groove to about midway of margin and then falls abruptly; eyes, anterior row recurved, a.l.e. little more than radius of a.m.e., small eyes about midway between first and third rows, dorsal eyes not on extreme margin of carapace and subequal to a.l.e.; quadrangle of lateral eyes slightly wider in front; clypeus less than half a radius of a.m.e. and without hairs or scales; mandibles dark brown, slightly divergent, with a distinct carina on both margins, area between iridescent, inner margins parallel for basal third, thence abruptly diverge; at point of divergence is a tooth directed forward; on the superior margin of the fang groove are two small teeth, on the inferior margin is a broad cusp opposite the two teeth on the upper margin, divided in four or five denticles, fang long and sinuous; labium as long as wide; maxillae brown, twice as long as labium, upper margin a round lobe; sternum pale yellow, oval, two thirds as long as wide; IV coxae almost touching; abdomen pale yellow with a pair of faintly marked stripes on basal half, a pair of dark spots posterior to the middle, and a smaller pair above the spinnerets, sides with dark lines, venter with a large black spot from fold almost to spinnerets, a lobe over the opening of spiracle; legs, 4-3-1-2, anterior coxae with a pronounced basal lobe, I pair enlarged,

all joints but tarsus dark brown, coxae twice as long as wide, trochanter less than one-third as long as coxa and very much narrowed, a retro-lateral fringe of short black hairs on distal half of femur, patella and tibia, ventral side of femur flattened with a slight carina each side and area between an iridescent violet, ventral distal half of patella and entire length of tibia with a brush of short black hairs, spines, tibia, ventral, 2-2-2, lateral, 2, all spines short and basal pair very small, metatarsus, ventral, 2-2, basal pair very long, lateral, 2, II pair not enlarged and no ventral fringe of hairs, spines same as on I pair, III and IV pairs pale yellow, with a large dark spot on ventral side of femora near tip, broken dark rings at base and middle of tibiae, all patellae with paired lateral spines, IV metatarsus with apical whorl only, IV tibia longer than III tibia; palpus not as long as cephalothorax, femur curved, tip with a dense mass of white hairs forming a crest on dorsal side, as long as tibia plus patella, tibia slightly longer than patella, tibial apophysis as long as diameter of joint, tarsus a little longer than tibia, palpal organ very simple, bulb not extending on tibia, embolus at tip and curved.

Female. Length, 6.5 mm., ceph. 2.5 mm., abd. 3.8 mm.

Cephalothorax very dark about eyes, a median pale area extends forward between the posterior eyes, lateral stripes of white hairs; eyes as in male; mandibles vertical, pale brown, superior margin of fang groove with three teeth and a scant scopula to base of fang, inferior margin with a large plate divided in four or five teeth, fang short with a heavy base; labium same as in male; maxillae brown, inclined, with outer margins rounded; sternum pale; abdomen dull yellow with a pair of dark stripes broken in spots, dark streaks on sides, venter pale; legs, pale, I and II pairs slightly enlarged, a scant fringe of rather colorless short hairs on under side of I femur, patella and tibia as in the male but with no brush, spines same as in male, basal pair on metatarsus almost as long as the joint; epigynum, two large oval depressions separated by a quarter diameter and the same distances from the epigastric fold, with a darkened circular area in anterior portion.

Franganillo described this species from a female and an immature male from Santiago. It is probably common all over Cuba, as it has been found abundantly in the garden at Soledad, on the south side of Pico Turquino, Trinidad Mountains, and San Vicente in Pinar del Rio. In the Peckham Collection, there are three females from Holguin collected by Parish, and marked by Peckham as a new species.

There are two forms of males, the larger described above, having the large divergent mandibles, with the anterior side flat and a carina on

each margin, fang groove deeply excavate, and fang long and sinuous; this form has the first pair of legs enlarged, the ventral side of the femur flattened, often with a retrolateral fringe of short hairs beneath patella and tibia; the smaller form has the vertical mandibles as in the female, but the anterior side is flat with a carina on each margin, fang groove excavate, and the arrangement of teeth is the same as in the larger form, the first leg is not as large, but the ventral side is flattened while the retrolateral fringe and the brush on the patella and tibia is not as heavy.

AGOBARDUS FIMBRIATUS spec. nov.

Male. Length, 3.7 mm., ceph. 2.0 mm., abd. 1.5 mm.

Cephalothorax very dark with a pale stripe from the short thoracic groove to posterior margin, white hairs between the eyes of the anterior row and a narrow marginal stripe of white hairs on posterior half and a patch of white hairs posterior to thoracic groove, a slight lateral swelling below the lateral eyes which is margined by a crest of short black hairs; eyes, anterior row of eyes covers the entire width of head, a.l.e. about half the diameter of a.m.e., small eyes about midway between first and third rows, dorsal eyes not on extreme margin of carapace and subequal with a.l.e.; quadrangle of lateral eyes as wide behind as in front; clypeus equal to one-half radius of a.m.e., slightly retreating and covered with white scales; mandibles dark, large and strongly divergent, a fringe of dark curving hairs on outer margin to base of fang, superior margin of fang groove with a compound tooth at median edge and a few cusps each bearing a hair, grading into corrugations near the fang, inferior margin with a large tooth or plate covering more than a third of the margin, the end nearest the base of the fang prolonged in a long sharp point, fang long and sinuous; labium brown, about as long as wide; maxillae pale, more than twice as long as labium, outer corner produced in a slight lobe; sternum oval, two-thirds as wide as long, IV coxae almost touching; abdomen with a median pale stripe bordered by broad dark stripes broken at the middle, posterior half with vague chevrons, venter dark, with no lobe over spiracle; legs, 4-3-1-2, I pair pale with short dark hairs on all joints, coxa enlarged, femur flattened laterally, with no modifications, spines, patella, lateral, 1-1, tibia, ventral, 2-2-2, basal pair very short, lateral, 2, metatarsus, 2-2, basal pair very long, lateral, 2, II pair slightly enlarged and clouded with dark hairs, spines same as on I pair, III and IV pairs pale, tibiae slightly darker, all patellae with

1-1 lateral spines; palpus as long as cephalothorax, femur curved, as long as tibia plus patella, tibia and patella of equal length, tibial apophysis dark, not quite as long as diameter of joint, tarsus twice as long as tibia, covered with long coarse black hairs, palpal organ very simple as in others of the genus.

Holotype ♂ Cuba; Soledad, woods, 3 August, 1931, (Worley).

Paratype 2 ♂ Cuba; Soledad, 3 August, 1931, (Worley).

Paratype ♂ Cuba; Soledad, 1-11 August, 1934, (Darlington).

In this species there are males with two forms of mandibles, the type with the large divergent mandibles, and the smaller form with vertical mandibles. The smaller form is darker, the anterior legs are all dark, but the palpus is the same in both and the mandibles have the fringe of short dark hairs. The species is very close to *Agobardus prominens* but it lacks the swelling below the lateral eyes and the mandibles have a fringe of short hairs instead of a carina.

AGOBARDUS KEYSERLINGI spec. nov.

Figures 254, 255, 257, 259

Male. Length, 4.8 mm., ceph. 2.6 mm., abd. 2.5 mm., mand. 2.8 mm.

Cephalothorax reddish-brown, black about the eyes, below the lateral eyes orange-red hairs, a small spot of white scales on thoracic slope, white scales on lateral margins of posterior half, cephalic portion high, no lateral swellings below lateral eyes, eye area flat, crescent-shaped depression between posterior eyes from which starts the short thoracic groove, sides rounded, sloping, thoracic portion darker, sloping abruptly from midway between groove and posterior margin; eyes, anterior row very strongly recurved, almost touching, a.l.e. little more than half the diameter of a.m.e., small eyes midway between first and third rows, p.l.e. and a.l.e. subequal; quadrangle of lateral eyes as wide behind as in front; almost no clypeus below a.m.e.; mandibles porrect, slightly divergent, a long sharp tooth on median margin very near the base, with tips touching, near outer margin at same distance from base, a cusp bearing a stout incurving tooth, dorsal surface slightly rounded and shining, with a distinct ridge on outer margin, seen from the ventral side, the large tooth is not on margin of fang groove, on superior margin is a compound tooth at end of a carina, on the inferior margin slightly nearer the base of the fang is a compound tooth with the largest point directed towards the fang, each margin has a distinct carina, an excavate area from teeth to

base, fang long and slightly sinuous with apical third slightly constricted; labium dark brown, longer than wide, lateral margins emarginate at base; maxillae brown, almost twice as long as labium, with upper outer corner produced in a distinct pointed lobe; sternum brown, anteriorly little wider than labium, three-quarters as wide as long, rather pointed between IV coxae, which are separated by almost half a diameter, I coxae largest, trochanters three-quarters as long as coxae; abdomen pale, covered with long and short hairs, lateral dark stripes almost meeting at middle and gradually disappearing, four faint cross bars on posterior half that could almost be called chevrons, venter with a broad pale gray stripe from pedicel to near spinnerets, a reddish lobe covering the openings of the spiracle; legs differing little in length, 1-4-3-2, I pair heaviest, coxae and trochanters very long and can be seen from the dorsal side, femur pale on dorsal side, ventral basal portion dark, femur slightly enlarged, flattened laterally, on ventral side just above the base is a prominent point or cusp, spines, patella, lateral, 1-1, tibia, dorsal, 0, ventral, 2-2-1, prolateral, 2, median and basal, retrolateral, 2, metatarsus, ventral, 2-2, lateral, 2-2, II pair pale, femur with a prolateral dark spot, but not modified, tibia with a prolateral stripe, spines same as on I pair, III and IV pairs pale, spines, patella, lateral, 1-1, III metatarsus, median and apical whorls, IV metatarsus, basal, median and apical whorls; palpus longer than cephalothorax and very slender, pale brown, femur curved, dark with a few white scales at tip, tibia longer than patella or cymbium, with a few orange-red scales on dorsal side, tibial apophysis a dark spur, not as long as diameter of joint, no ventral lobe on tibia, cymbium about two-thirds as long as tibia, a heavy brush of coarse black hairs on prolateral margin, a few orange-red scales on dorsal side, palpal organ of the usual type with the embolus at tip, starting from a thick base and after an abrupt turn, ends as a slender tube outside the cavity, palpal organ does not extend as a lobe on tibia.

Female. Length, 4.0 mm., ceph. 2.0 mm. abd. 2.1 mm.

Cephalothorax pale yellow with lateral eyes on a broad dark stripe, a few white hairs between eyes of anterior row, cephalic portion high, no swelling below lateral eyes, eye area flat, thoracic portion sloping abruptly from a point midway between thoracic groove and posterior margin; eyes same as in male; mandibles pale brown, vertical, slightly geniculate, fang groove short, horizontal, two teeth on superior margin; opposite on inferior margin a short plate divided in three points, fang with a thick base, evenly curved; maxillae pale, almost twice as long as labium, upper outer corner evenly rounded, upper margins black and

transverse; sternum pale, four-fifths as wide as long, anteriorly the width of labium, pointed between IV coxae, IV coxae separated by a diameter; abdomen oval, pale, with dark lateral stripes interrupted before the middle, posterior half with dark chevrons, sides with longitudinal dark stripes, venter pale with a very faint gray broad stripe as in the male; legs, pale, 1-4-2-3, I pair not modified, spines same as in the male; epigynum an oval pale depression, wider than long, with two oval dark sacs almost filling the area, openings apparently near anterior margin, separated by more than a diameter.

Holotype ♂ Cuba; Oriente, Boniato Range, Rio Frio, 5 June, 1936, (Darlington).

Allotype ♀ Cuba; Sierra de Cobre, Loma del Gato, 2,600-3,325 feet, (Bruner).

Paratype ♂ Cuba; Oriente, Boniato Range, Rio Frio, 5 June, 1936, (Darlington).

Paratype ♂ ♀ Cuba; Sierra de Cobre, Loma del Gato, 2,600-3,325 feet, (Bruner).

Paratype ♂ ♀ Cuba; South side of Pico Turquino, 3,000-5,000 feet, June 1936, (Darlington).

Paratype ♂ ♀ Cuba; Pico Turquino, 6,000 feet, 16-21 June, 1936, (Darlington).

Paratype ♂ Cuba; Coast below Pico Turquino, 30 June, 1936, (Darlington).

There are two forms of males; the larger described above has the large divergent mandibles, with the tooth on the inferior margin of the fang groove in the form of a plate ending in a sharp point directed towards the base of the fang; the first pair of legs longest and heaviest, with the large pointed cusp near the base of the femur. The smaller form with vertical mandibles, has the plate on the inferior margin of the fang groove divided in three teeth. In this form, the palpus is shorter but still longer than the cephalothorax, and the tibia is shorter. The palpal organ is the same in each. *Agobardus keyserlingi* is the only species with cusps on the outer lateral margins of the mandibles that has been seen from Cuba. *Emathis minuta* Petrunkevitch from Puerto Rico, which probably belongs in this genus, has a similar cusp but nearer the base of the fang, and an undescribed species from Jamaica also has this cusp. The females found with the males, are smaller, paler, and neither legs nor mandibles are modified. The epigynum is similar to *Agobardus prominens* but the depressed area is much wider in proportion, and both openings and tubes are separated, entering the sacs on the outer margins.

AGOBARDUS MANDIBULATUS spec. nov.

Figures 262, 263, 268, 269

Male. Length, 4.0 mm., ceph. 2.2 mm., abd. 2.8 mm.

Cephalothorax golden-brown, black about the eyes, posterior margin black, a few orange and white hairs between anterior eyes, cephalic portion high, with a recurved depression between posterior row of eyes from which starts the short thoracic groove, thoracic portion slopes abruptly midway between the groove and the posterior margin, a patch of white hairs midway between thoracic groove and margin; eyes, anterior row recurved by upper margins, a.l.e. less than half the diameter of a.m.e., small eyes midway between first and third rows, dorsal eyes not on extreme edge of carapace and subequal with a.l.e.; quadrangle of lateral eyes slightly narrower behind and two-thirds as wide as long; clypeus less than a radius of a.m.e., without hairs or scales; mandibles, elongate, porrect and only slightly divergent, anterior surface flattened, corrugate, little more than half as wide at tip as at base, longer than diameter of mandible at base, fang groove strongly oblique, superior margin with a bifid tooth, two-thirds distance from base of fang, inferior margin with a plate or cusp divide into four unequal denticles, slightly nearer base of fang than tooth on upper margin, both margins with a distinct carina, basal portion excavate, fang longer than basal joint and sinuous, distal third plainly constricted; labium longer than wide; maxillae very broad, rounded on inner margin, upper edge convex and upper outer corner prolonged in a sharp point so that greatest width is equal to length; sternum brown, widest between I coxae and ending in a rounded point in front of IV coxae; abdomen pale, with a pair of dark stripes from near base, interrupted near the middle and ending about one-third above spinnerets, median area on posterior half with a few oblique dark marks not meeting in middle, venter light gray, with a lobe over opening of spiracle; legs, 1-4-3-2, I pair slightly longer than IV pair, enlarged, femur dark brown, other joints lighter, coxa largest with a basal lobe, trochanter two-thirds as long as coxa, rather slender, femur with a large ventral conical tubercle very near base, fringe of short black hairs from base to tubercle and a scant fringe of white hairs on apical half, spines, patella, lateral, 1-1, tibia, ventral, 2-2-2, lateral, 2, metatarsus, ventral, 2-2, lateral, 2-2, II pair slightly enlarged, femur not as dark as I pair, with a very scant fringe of hairs and no spur, coxa with basal lobe, other joints pale, III and IV coxae and tro-

chanters brown, other joints pale yellow, all patellae with 1-1 lateral spines; palpus longer than cephalothorax, very slender, femur curved, tibia one and a half times length of patella and almost twice as long as tarsus, tibia and patella white with a few dark hairs, tibial apophysis not as long as diameter of joint, tarsus covered with dark hairs, palpal organ very simple, embolus at tip forms a semicircle and ends outside the cymbium.

Female. Length, 4.6 mm., ceph. 2.1 mm., abd. 2.2 mm.

Cephalothorax a very pale brown, black about eyes and a narrow median pale stripe from posterior margin which disappears in eye area, sides vertical, eye area flat, crescent-shaped depression between posterior row of eyes from which starts the short thoracic groove; eyes same as in male; mandibles pale, vertical, fang groove transverse, superior margin with two teeth, inferior margin with a plate divided in four subequal denticles, fang with a thick base; labium pale, longer than wide, tip narrowed and lateral margins at base excavate; maxillae pale, almost twice as long as labium, inclined so that tips almost touch, upper margins with a dense black scopula, upper outer corner rounded but not prolonged in a lobe as in the male; sternum pale, narrower than in male, IV coxae separated by more than half a diameter; abdomen pale, with a pair of dark lateral stripes from near base, broken about middle and ending one-third above spinnerets, in median pale area of posterior half, four pairs of diagonal dark bars not meeting in middle, sides pale, venter pale with a faint dark U mark, no lobe over opening of spiracle as in male; legs, 3-4-1-2, pale, with dark spines, I pair not enlarged, spines, patella, lateral, 1-1, tibia, dorsal, 0, ventral, 2-2-2, basal, median and apical, lateral, 1-1, metatarsus, dorsal, 0, ventral, 2-2, lateral, 2-2 IV metatarsus with apical whorl; epigynum, a pair of circular depressions, faintly marked, separated by half a diameter, below are darkened areas with a pair of very dark circular spots just posterior to the pale areas; the openings are probably faint depressions half over the dark spots.

Holotype ♂ Cuba; Trinidad Mountains, Buenos Aires, 2,500-3,500 feet, 9 May, 1936, (Darlington).

Allotype ♀ Cuba; Trinidad Mountains, Buenos Aires, 2,500-3,500 Feet, 9 May, 1936 (Darlington).

Paratypes 5 ♂ 1 ♀ Cuba; Trinidad Mountains, 9 May, 1936.

Paratype ♂ Cuba; Trinidad Mountains, Mina Carlota, 19 March, 1925, (Salt and Myers).

Paratype ♂ Cuba; Soledad, May 1936, (Darlington).

Paratype ♂ Cuba; Soledad, 28 November, 1926, (Darlington).

Paratype ♂ Cuba; Soledad, San José, summit, 1 August, 1931, (Worley).

Agobardus mandibulatus is very close to *Agobardus keyserlingi*, known only from the eastern end of Cuba. In both, the males have a large median tooth on the mandibles, but *A. mandibulatus* lacks the tooth from a cusp on the outer lateral margin of the mandibles. Both have the first femur in the male produced in a ventral sharp angle or cusp near the base. The palpus of *A. mandibulatus* has the tibial apophysis hardly as long as the diameter of the joint and the tibia about twice as long as the tarsus; the tube in the palpal organ has a more simple curve. In both species, there is great variation in the length of the median tooth on the mandible and in the size of the cusp at the base of the first femur.

Keyserling, in his description of the genus, states that the labium is not longer than broad, a character that probably is not constant.

AGOBARDUS MUNDUS spec. nov.

Figures 258, 260, 264

Male. Length, 4.0 mm., ceph. 2.4 mm., abd. 2.5 mm.

Cephalothorax chestnut-brown, with a pale stripe from posterior margin to, and including thoracic groove, no spot of white hairs on posterior slope, many long bristles above anterior eye row, cephalic portion very high and carried forward, eye area flat, sides parallel and vertical, crescent-shaped depression between posterior eye row from which starts the short thoracic groove, thoracic portion rather short, sloping abruptly from groove to margin; eyes, anterior row recurved by upper margins, eyes equidistant, a.l.e. more than half the diameter of a.m.e., small eyes midway between first and third rows, p.l.e. and a.l.e. subequal; quadrangle of lateral eyes as wide behind as in front; clypeus below a.m.e. less than a radius of a.m.e. with no hairs or scales; mandibles dark brown, vertical, no carina on front lateral margins, fang groove oblique, superior margin with one long tooth at inner margin followed by a much smaller tooth, small denticles from base of fang to tooth each bearing a long bristle, inferior margin with a very large plate or cusp, nearer base of fang than tooth on upper margin, corner nearer base of fang in a long sharp point, fang a simple curve with a faint tooth on lower side about middle, labium brown, longer than wide, lateral margins at base emarginate; maxillae brown, twice as long as labium, inclined, tips rounded, and upper outer corner

not prolonged in a lobe; sternum as wide as long, widest between II coxae, ending in a rounded lobe in front of IV coxae, IV coxae almost touching; abdomen oval, pale with a pair of wide parallel dark stripes which end just beyond the middle, on posterior half are three pairs of irregular spots, sides dark, venter with a dark brown triangle which does not reach the spinnerets, opening of spiracle not covered with a lobe; legs, 1-4-2-3, I pair not modified, pale brown, femur not enlarged, spines, patella, 1 prolateral, tibia, dorsal, 0, ventral, 2-2-2, lateral, 2, metatarsus, ventral, 2-2, basal pair more than half the length of joint, lateral, 2, II pair pale, spines same as on first pair, III and IV pairs pale, spines, patella, 1-1, metatarsus with apical whorl only; palpus not quite as long as cephalothorax, dark, femur bent, apical half on dorsal side covered with long white hairs which form a crest, tibia very little longer than patella, tibial apophysis slightly divergent, stout with an incurving tip, about as long as diameter of joint, bulb not carried on tibia, embolus at tip, quite short, curved in a plane at right angles to bulb, tip straight and nearly reaching margin of cavity.

Female. Length, 4.0 mm., ceph. 1.8 mm., abd. 1.8 mm.

Cephalothorax with dark lateral stripes from posterior eye row to posterior margin, median area pale but darker in eye area, thoracic groove very short, starting from the crescent-shaped depression between dorsal eyes, posterior lateral margins pale; eyes same as in male; no clypeus below a.m.e.; mandibles pale brown, vertical, fang groove horizontal and rather short, superior margin with two small teeth and a row of small granules each bearing a bristle, inferior margin with a broad plate, which has the corner farthest from the fang produced as a tooth; labium pale brown, longer than wide; maxillae almost twice as long as labium, tips and upper outer corner rounded; sternum pale, same as in male; abdomen pale with parallel dark stripes deeply indented on outer side about the middle and connected by a bent transverse bar just above the spinnerets, no lobe over spiracle; legs, 1-4-2-3, pale, with broken dark rings at base and at middle of tibiae, spines as in male; epigynum, a pair of circular depressions, almost touching, with very faintly chitinated margins, posterior are two large deeply colored round sacs which touch on median line, between depressed areas, and dark sacs are transverse tubes.

Holotype ♂ Cuba; Pico Turquino, 6,000 feet, 16-21 June, 1936, (Darlington).

Allotype ♀ Cuba; South side of Pico Turquino, 3,000-5,000 feet, June, 1936, (Darlington).

Paratypes ♂ 5 ♀ Cuba; South side Pico Turquino, 3,000-5,000 feet, June, 1936, (Darlington).

Paratype ♂ Cuba; Pico Turquino, 5,000 feet, June, 1936, (Darlington).

According to the classification given by Simon in the Hist. Nat. Araignées, this species should be placed in *Commoris* in the *Hasariac*, as the plate on the inferior margin of the mandibles is divided in two unequal teeth in the male and the upper outer corner of the maxillae is rounded, not prolonged in a lobe. However, it differs from the other species of *Agobardus* only in these two characters and it has the same pattern on the abdomen, a very high cephalic portion and the same type of epigynum. It differs from *Commoris enoplognatha* by the small vertical mandibles that have no carina on the outer margin.

AGOBARDUS PROMINENS spec. nov.

Figures 261, 266, 267, 271

Male. Length, 4.5 mm., ceph. 2.2 mm., abd. 2.1 mm.

Cephalothorax dark brown, almost black about the eyes, golden and white hairs between the eyes, with a broad pale stripe from thoracic groove to posterior margin, cephalic portion high, a swelling or ridge starting from lateral margin and forming a broad lobe below the lateral eyes, black hairs on posterior margin of ridge directed forward, and scattered white scales on anterior portion, thoracic groove short, starting from the crescent-shaped depression between dorsal eyes; eyes, anterior row strongly recurved, a.l.e. about half a diameter of a.m.e., small eyes midway between first and third rows, p.l.e. and a.l.e. subequal; quadrangle of lateral eyes as wide behind as in front; clypeus less than a radius of a.m.e., thickly covered with short white hairs and a fringe of white hairs on the margin; mandibles dark, strongly divergent with a sharply marked carina on exterior side from base to origin of fang, ending in a tooth above the fang, portion inside the carina concave and slightly corrugate, inner margin excavate, fang groove strongly oblique, superior margin with a large compound tooth, inferior margin with a plate or tooth divided in cusps almost opposite tooth on upper margin, cusp nearer fang very long, fang longer than groove and sinuate, distal third constricted; labium as long as wide; maxillae with almost parallel sides, upper outer corner prolonged in a small lobe; sternum brown, four-fifths as wide as long, widest between I coxae, IV coxae almost touching; abdomen grayish-yellow with

vaguely defined lateral dark stripes, sides shaded with dark gray, venter black from pedicle to spinnerets, no lobe over spiracle; legs, 1-4-3-2, I pair largest, coxa, femur dark, distal half much enlarged, no ventral fringe of hairs, other joints yellow, with dark hairs on ventral side of patella, tibia and metatarsus, spines, femur, dorsal, 2, patella, lateral, 1-1, tibia, ventral, 2-2-2, lateral, 2, metatarsus, ventral, 2-2, lateral, 2, II pair, dark and slightly enlarged, fringe of dark hairs beneath on tibia, spines same as on I pair, all patellae have 1-1 lateral spines; palpus as long as cephalothorax, very slender, femur curved, dark brown with a mass of white hairs on distal third, patella and tibia of equal length, patella flattened on dorsal side, tibia very dark, tibial apophysis not as long as diameter of joint and not pressed close to tarsus, tarsus little longer than tibia and almost black, palpal organ very simple as in others of the genus, embolus at tip forms two-thirds of a circle.

Female. Length, 4.0 mm., ceph. 1.6 mm., abd. 2.5 mm.

Cephalothorax very dark about eyes, median pale stripe very distinct, no lateral swellings below lateral eyes as in male; eyes same as in male; mandibles vertical, without carina on outer side, superior margin of fang groove with six minute cusps between base of fang, and a large plate which is divided in several cusps, inferior margin with plate that is divided in two sharp cusps, fang short; abdomen with a median pale stripe with dark lateral stripes broken at the middle, posterior half darker, venter pale with dark spots, the largest directly in front of the spinnerets; legs, 1-4-2-3, short and stout, pale yellow, I pair, femur enlarged, spines, tibia, ventral, 2-2-2, lateral, 3, metatarsus, ventral, 2-2, basal pair almost as long as joint, lateral, 2, all patellae with 1-1, lateral spines; epigynum, two oval clear areas close together with round dark sacs at the base almost touching on median margin, tips of sacs slightly pointed and darker, openings close together at anterior margin of clear areas, connected by colorless tubes which apparently enter sacs at base, these tubes are almost parallel the first half and gradually diverge.

Holotype ♂ Cuba; Soledad, garden, 14 August, 1931, (Worley).

Allotype ♀ Cuba; Soledad, BelMonte, 10 August, 1931, (Worley).

Paratype ♂ Cuba; Soledad, garden, 14 August, 1931, (Worley).

Paratype ♂ Cuba; Soledad, March 1925, (Salt and Myers).

A smaller form of the male has been found with vertical mandibles as in the female, but the exterior surface has the distinct carina as in the larger male, the fang groove has the same teeth as in the larger form, and there is no difference in the palpus. This species has the

same lateral swelling below the lateral eyes as in the genotype, but it also has a distinct carina on the outer side of the mandibles that ends in a tooth above the fang as is found in *Commoris enoplognatha* Simon. The first leg is not modified.

Genus ZYGOBALLUS Peckham 1885

ZYGOBALLUS CONCOLOR spec. nov.

Figures 265, 272, 273

Male. Length, ceph. 1.6 mm. without mandibles, abd. crushed.

Cephalothorax brown, cephalic portion covered with small iridescent scales, two darkened areas between posterior eyes, clypeus thickly covered with white scales which extend on lateral margins as far as p.l.e., cephalic portion very high and flat, occupying three-fifths of carapace, sides vertical, no thoracic groove but a wide shallow depression between p.l.e., carapace widest at p.l.e.; eyes, anterior row re-curved so that upper margins form a straight line, a.l.e. less than half a diameter of a.m.e., small eyes one-third nearer first than third row, very small and inside a line drawn between a.e.l. and p.l.e., dorsal eyes on extreme margin of arapace, directed outward, subequal with a.l.e.; quadrangle of lateral eyes wider behind than in front, three-quarters as wide as long; clypeus concave, fully half the diameter of a.m.e. and thickly covered with white scales; mandibles vertical, slightly divergent, median margin deeply excavate, front surface covered with white scales, usual carina from base to origin of fang slight, and tooth above fang small, fang groove long and oblique; superior margin with one long sharp tooth near the inner margin that can be seen from the outside, inferior margin with a plate that extends from inner margin two-thirds the length of groove, ending in a "hammer-headed tooth," fang long, slender and evenly curved; labium brown, broader at base than long, sides excavate at base, tip less than half the width at base; maxillae brown, nearly twice as long as labium; sternum only slightly longer than wide, anteriorly little wider than labium, ending in a truncate tip in front of IV coxae, IV coxae almost touching; abdomen crushed so that it is impossible to distinguish markings; legs, 1-4-2-3, I pair much the longest, coxa elongate, trochanter two-thirds as long as coxa, femur dark, slightly enlarged, flattened laterally, other joints pale yellow, spines, patella, 0, tibia, ventral, 2-2-2, first pair one-third distance above base, prolateral row heavier and slightly curved, lateral, 0, metatarsus, ventral, 2-2, II pair pale yellow, spines,

patella, 0, tibia, ventral, 1-3, metatarsus, ventral, 2-2, III pair, pale yellow, spines, 0, IV pair, femur distal half dark, remainder of leg pale, spines, tibia, ventral, 2 apical, metatarsus, 1 basal whorl; palpus as long as cephalothorax, femur dark, other joints pale, seen from above, tibia two-thirds as long as patella, tibial apophysis very broad at base with a short, curved black tip, terminal joint as long as patella, on inner side near tip is a row of stiff black hairs, embolus a short stout black point near tip.

Female. Length, 4.0 mm., ceph. 1.5 mm., abd. 2.5 mm.

Cephalothorax deep reddish-brown, black about the eyes, sides thickly covered with white scales and a few long hairs directed forward, two darkened areas posterior to first row of eyes as in the male, a long curved bristle below p.l.e., cephalic portion high and level, slopes abruptly from dorsal eyes to posterior margin, no thoracic groove, eye area covers three-fifths of carapace, anterior row of eyes form a straight line by upper margins, a.m.e. more than twice the diameter of a.l.e., small eyes one-third nearer first than third row, dorsal eyes on extreme margin of carapace and larger than a.l.e.; quadrangle of lateral eyes wider behind than in front; clypeus almost wanting below a.m.e., below a.l.e. covered with white scales; mandibles vertical, brown, covered with white scales, slightly rounded, superior margin of fang groove with two teeth, inferior margin with one sharp tooth, fang evenly curved; labium nearly twice as long as wide, more than half as long as maxillae; maxillae much broader at tip than at base, tip rounded; sternum pale, oval, but little longer than wide, widest between II coxae, IV coxae almost touching; abdominal markings very indistinct, showing a narrow median dark branched stripe on a deep yellow ground, sides dark, venter brown; legs, 4-1-2-3, I pair only slightly enlarged, femur reddish-brown with white scales, other joints paler, coxa largest and trochanter half the length of coxa, spines, femur, dorsal, 1 minute spine near tip, patella, 0, tibia, ventral, 2-2-2, basal pair one-third length of joint from base, lateral, 0, metatarsus, ventral, 2-2, lateral, 0, II pair much smaller than I pair, coxa and trochanter normal, spines, femur, dorsal, 1 small spine near tip, patella, 0, tibia, ventral, 1-1-1, lateral, 0, III and IV pairs, femur dark, with darker rings at base of patella, tibia and metatarsi, no spines; epigynum, two oval openings almost touching, with posterior margins heavily chitinized, just anterior to the emarginate posterior margin, twisted tubes can be seen beneath the skin.

Holotype ♂ Cuba; Soledad, 1-11 August, 1936, (Darlington).

Allotype ♀ Cuba; Havana, (Cervera).

This species is closely related to *Zygoballus suavis* Peekham from Jamaica but differs in the male in the following points; tooth on upper side of mandibles smaller, plate on inferior margin of fang groove with two sharp points at tip, ("hammer-headed" of Cambridge) instead of one point; a heavy band of white scales on clypeus extending on sides to p.l.e., and the in palpus, by the patella longer than tibia instead of equal length.

Peckham fails to mention the epigynum, in the description, and the pair in the collection in the Museum of Comparative Zoology has been dried, so that it is impossible to distinguish details. All the species from Central America are figured with the openings widely separated. There is always the possibility that the pair are of different species as they were not collected together, but so far as is known the fauna of Havana and Soledad is similar, and this is the only species of the genus reported from the island.

Division III. Unidentati
Sub-family PLEXIPPINAE
Genus CORYTHALIA C.L. Koch 1850
CORYTHALIA ARCUATA Franganillo
Figures 275, 276

Corythalia arcuata Franganillo, 1930, p. 43, fig. 16; *ibid.*, 1936, p. 137, fig. 76.

Male. Length, 5.3 mm., ceph. 3.0 mm., abd. 2.6 mm.

Cephalothorax dark brown, lateral stripes of white hairs and white scales about the eyes, cephalic portion high and inclined forward, sides vertical and parallel, a crescent-shaped depression behind dorsal eyes from which starts the short thoracic groove, area anterior to depression sharply defined with black, eye area flat, thoracic portion slopes gently from the groove halfway to posterior margin, then falls abruptly; eyes anterior row recurved, equidistant, a.m.e. twice the diameter of a.l.e., small eyes midway between first and third rows, a.l.e. and p.l.e. subequal, p.l.e. raised and directed slightly backward, several long bristles between eyes of anterior row and a group of four long bristles below lateral eyes; quadrangle of lateral eyes as wide behind as in front; clypeus below a.m.e. less than half a radius of a.m.e., scantily covered with orange scales, several long hairs on margin of clypeus; mandibles dark with scattered white scales, rather small, vertical, front surface flat, fang groove short, no teeth on superior margin, one very small tooth on inferior margin, fang short with a very thick base;

labium as long as wide; maxillae inclined and almost meeting over labium; sternum dark with scattered white iridescent scales, two-thirds as long as broad, I coxae separated by a diameter, truncate in front of IV coxae; abdomen oval, specimens that have not been rubbed show four spots of thick black hairs, basal pair not well defined, second pair smaller, on posterior half of abdomen the space between spots thickly covered with white iridescent scales and scattered long hairs; in some lights the scales appear tawny or even a bright red, venter dull gray, spinnerets long; legs, 3-4-1-2, anterior pairs heavier, prolateral sides with scattered iridescent scales, all trochanters with scales, I pair, femur flattened laterally, with a scant fringe of black hairs beneath patella and tibia, spines, patella, 0, tibia, dorsal, 0, ventral, 2 apical, followed by 1-1 prolateral, 1-1, all spines heavy but not as long as diameter of joint, metatarsus, ventral, 2-2, lateral, 2-2, so as to form a whorl, II pair, dark brown, with a scant fringe of black hairs on ventral side of tibia and metatarsus, and a scanner fringe or crest of short black hairs on dorsal side of tibia and metatarsus, spines same as on I pair, III pair, dark brown, patella, tibia and metatarsus with a ventral fringe, not brush, of long black hairs, and a crest of shorter hairs on dorsal side of metatarsus, also a sharp carina on both prolateral and retrolateral side of metatarsus; area between slightly corrugate and iridescent, the crest is on the retrolateral carina, spines, patella, retrolateral, 1; impossible to see spines on tibia and metatarsus because of the heavy fringe of hairs, IV pair, paler than other legs, with no fringe or crest of hairs, patella and tibia shorter than patella and tibia of III pair but metatarsus IV longer than metatarsus III, spines, patella, lateral, 1-1, tibia, scattering, metatarsus, apical and median whorls; palpus dark, not as long as cephalothorax, tip of femur and patella covered with white iridescent scales, seen from above tibia shorter than patella, tibial apophysis broad, abruptly narrowing to a short, incurving hook, cymbium covered with coarse black hairs, bulb extending in a lobe on tibia and partly covered with long, coarse bristles, upper portion of bulb, a lobe which half hides the short and straight embolus.

Female. Length, 6.0 mm., ceph. 3.1 mm., abd. 3.1 mm.

Markings and eyes same as in male; legs lack the fringe and modifications of the III metatarsus, anterior patellae with prolateral spine, posterior patellae with prolateral and retrolateral spines; epigynum, a broad median lobe abruptly ending in a point, the openings are probably each side at the anterior end and are widely separated, beneath can be seen large dark sacs.

The type was found in the Sierra Maestra by Franganillo. From the number collected at Soledad, it must be very abundant. It has been taken on the summit of Pico Turquino and at various places in the Oriente. In the Peckham Collection, there is a pair from Holguin collected by Parish. Undoubtedly it is near *Corythalia peckhami* Petrunkevitch from Dominica, for both species have the heavy fringe of black hairs beneath the patellae, and tibiae of the second and third legs but the palpus and epigynum are quite distinct. There is great variation in size, and in the abdominal markings of both of male and female. In some specimens, there are two pairs of black spots, one basal but not well defined, and the second pair of spots on the posterior half of the abdomen sharply outlined by a distinct line of white scales; on other specimens the basal spots are missing and there is a median stripe of tawny scales that is very conspicuous. Again, the amount of fringe of dark hairs on the anterior legs varies, but the third leg always has a heavy fringe of dark hairs, and the dorsal side of the III metatarsus has a carina on both retrolateral and prolateral sides with an iridescent area between. The tibial apophysis of the palpus is always the same, a broad base with an incurving hook at the tip.

CORYTHALIA AURATA (Hentz)

Attus auratus Hentz, 1846, p. 362, pl. 22, fig. 6.

Prostheclina cambridgei Peckham, 1889, p. 69, pl. 1, fig. 51, pl. 5, fig. 51.

Stoïdis aurata, Peckham, 1909, p. 527, pl. 38, fig. 7, pl. 43, fig. 9.

This brilliant little spider is common in collections from the southern part of the United States. Both males and females are in the Peckham Collection from Holguin made by Parish, and females have been taken at Soledad and Pinar del Rio. The marks on the abdomen are very similar to *Corythalia arcuata* Franganillo which accounts for the confusion of the two species.

Simon based the genus *Stoïdes* on *Prostheclina pygmaea* Peckham from St. Vincent, and separated it from *Corythalia* as the cephalothorax is higher and shorter, the thoracic portion is plainly narrowed and abruptly sloping, anterior row of eyes almost straight, small eyes nearer third than first row, legs without fringe, slender, with fewer spines, anterior metatarsi with no retrolateral spines and III and IV pairs subequal, simple hairs and no scales.

In 1909, Peckham added *aurata* Hentz to the genus *Stoïdes* and noted the differences from the genotype. The cephalothorax of *aurata*

is high but the clypeus and sides are vertical, not inclined, anterior row of eyes is curved, not straight, and the small eyes are midway between first and third rows; the anterior metatarsi have retrolateral spines, I and II pairs are slightly fringed, cephalothorax, abdomen and legs have iridescent scales but III and IV pairs are subequal. It seems to have more characters in common with *Corythalia* than with *Stoides* but eventually a new genus will be made for it. It is evidently related to many of the small species from the West Indies, placed by Peckham and Banks in the genus *Prostheclina*.

CORYTHALIA EMERTONI spec. nov.

Figures 270, 274, 279

Male. Length, 3.2 mm., ceph. 2.0 mm., abd. 1.5 mm.

Cephalothorax very dark brown, stripes of white scales above the margin, cephalic portion high and carried forward, sides parallel and vertical, crescent-shaped depression behind posterior eyes from which starts the short thoracic groove; thoracic portion slopes gently from the depression halfway to posterior margin and then falls abruptly; eyes, anterior row recurved by upper margins, eyes almost touching, a.m.e. more than twice the diameter of a.l.e., small eyes about midway between first and third rows, p.l.e. very convex and subequal with a.l.e.; quadrangle of lateral eyes slightly wider behind than in front; clypeus about diameter of a.m.e., scantily covered with white scales; mandibles dark brown, vertical, fang groove very short, no tooth on either margin, fang with a thick base; labium as long as wide; maxillae once and a half as long as labium, inclined over labium, upper outer corner prolonged in a slight lobe; sternum brown, four-fifths as wide as long, I coxae separated by more than a diameter and a half, ending in an obtuse point before IV coxae, IV coxae almost touching; abdomen with hairs and scales about rubbed off, a few white scales on sides and a few long black hairs left on basal pair of dark spots, both widely separated, and between posterior pair are indistinct chevrons, venter pale; legs, II right missing, 3-4-1-2, anterior pairs heavier, I pair, femur flattened laterally, dark, other joints paler, spines, patella, 1 prolateral, tibia, dorsal, 0, ventral, 2 apical, 1-1, retrolateral, prolateral, 2, metatarsus, ventral, 2-2, lateral, 2-2, II pair, brown, heavy fringe of black hairs on patella, tibia and metatarsus, spines, patella, prolateral, 1, tibia, spines can not be seen because of fringe, metatarsus, ventral, 2-2, lateral, 2-2, III pair, femur, dark beneath, other joints

paler, heavy brush of hairs on prolateral side of tibia and metatarsus, spines, patella, lateral, 2, tibia, 2 apical, 2 lateral, metatarsus, apical and median whorls, IV pair, pale, spines, patella, 2 lateral, tibia, scattering, metatarsus, apical and median whorls, IV metatarsus longer than III metatarsus; palpus shorter than cephalothorax, tip of femur and patella white and covered with white scales, seen from above, patella longer than tibia, tibial apophysis small, ending in a curved tip, bulb extends on tibia, embolus a short black spine at tip.

Female. Length, 3.8 mm., ceph. 1.9 mm., abd. 2.0 mm.

Cephalothorax same as in male, eyes same, 1 very long bristle below and between a.m.e.; abdomen with the same markings; legs, I right missing, 3-4-1-2, anterior pairs only slightly enlarged, no fringe on II or III pairs, all femora with a broad dark ring at tip, spines same as in male; palpi dark with tip of femur and patella covered with white scales as in male, terminal joint with a pointed tip; epigynum, the two openings are small, round and very dark, widely separated, posterior and almost touching are two sacs very much larger than the openings that are separated by a diameter.

Holotype ♂ Cuba; Soledad, Mina Carlota, November 1927, (Creighton).

Allotype ♀ Cuba; Soledad, Mina Carlota, November 1927, (Creighton).

Paratype ♀ Cuba; Pinar del Rio, San Vicente, July, (Archer).

This pair was identified by Mr. Emerton as *Stoides aurata* (Hentz). The abdominal markings are very much like that species but the latter never has a brush of hairs on the legs. It differs from the other species of the genus found in Cuba by the much smaller size, and the brush of hairs, not a fringe, on the third tibia and metatarsus.

CORYTHALIA PARVULA (Banks)

Figures 280, 282

Prostheclina parvula Banks, 1909, p. 168, pl. 45, fig. 1.

Male. Length, 4.0 mm., ceph. 2.1 mm., abd. 2.0 mm.

Cephalothorax very dark, almost black in eye area, probably in life covered with iridescent scales as a few remain; white about lateral margins and a brilliant, iridescent green on surface posterior to eyes, a recurved transverse depression between dorsal eyes from which starts the short thoracic groove, cephalothorax almost level behind groove for a distance about equal to space between dorsal and small

eyes, then it slopes abruptly to posterior margin, sides vertical; eyes, upper margins of anterior row recurved, a.l.e. about half the diameter of a.m.e., a.l.e. and p.l.e. subequal, small eyes about midway between first and third rows; quadrangle of lateral eyes narrower behind than in front and about twice as long as wide; clypeus inclined, less than a radius of a.m.e.; mandibles very dark brown with a few white scales, vertical, rather small, front slightly convex, fang groove very short, one small tooth on inferior margin, fang short and weak; sternum and mouth parts black, sternum little longer than wide, truncate in front, IV coxae touching, I and II coxae black, III and IV coxae gray; abdomen with a broad, light median stripe which, in posterior half, has irregular dark chevrons, lateral dark stripes much heavier and distinct at base, venter gray; legs, 4-3-1-2, I pair slightly enlarged, dark gray, tarsus pale, white scales on all joints but tarsus, a scant fringe of black hairs on femur, patella, tibia and metatarsus, II pair same as I pair but fringe on tibia and metatarsus only, II and III femora dark brown, other joints pale, white scales on all joints but tarsi, III patella longer than IV patella, spines, I pair, patella, 1 prolateral, tibia, ventral, spines not paired, 3 prolateral near tip, 3 retrolateral, middle spines longest, basal spines short, lateral, 0, metatarsus, ventral, 2-2, basal pair very long, lateral, 2, II pair, spines same as I pair, posterior patellae with prolateral and retrolateral spines; palpus short, femur dark brown, paler at tip, longer than tibia plus patella, tibia and patella white, covered with white hairs and iridescent scales, patella longer than tibia, tarsus dark brown covered with long black and white hairs, tibial apophysis with a slender incurving tip, a ventral lobe on tibia about the middle, against which the bulb of the palpal organ rests, embolus very short, terminal joint of right palpus missing.

Female. Length, 3.0 mm., ceph. 1.8 mm., abd. 1.7 mm.

Cephalothorax very dark, especially about the eyes, brilliant, iridescent green scales in patches about eye area, white scales about posterior lateral margins, recurved depression between dorsal eyes, thoracic groove short; eyes same as in male; mandibles dark brown, small; sternum, mouth parts and I and II coxae dark; abdomen with a wide median pale stripe not as sharply defined as in male, posterior half with dark chevrons, lateral dark stripes broken about the middle, basal half much larger and darker as in male, venter gray, darker on sides; legs, 4-3-2-1, yellowish brown, with no scales, I and II pairs enlarged, I pair with a slight fringe of colorless hairs on patella, tibia and metatarsus as in male, spines as in male but basal pair on I tibia very small and slender, middle pair very long; epigynum a broad

septum separating two round darkened areas, on posterior margin of which are two pairs of much darker spots, one pair is probably the openings.

Holotype ♀ Cuba; Cayamas, (Baker), Banks Coll.

Allotype ♂ Cuba; Isle of Pines; Sierra de Casas, 1915, (Barbour and Brooks).

♂ Cuba; Yaguajay, (Aguayo).

Corythalia parrula (Banks) is smaller than *C. aurata* (Hentz) but they have many characters in common. Both have the first pair of legs with a scant fringe of hairs, the third and fourth pairs sub-equal, and the inferior margin of the fang groove with one small tooth; the third leg is not modified.

CORYTHALIA SQUAMATA spec. nov.

Figures 277, 278

Male. Length, 4.5 mm., ceph. 2.2 mm., abd. 2.4 mm.

Cephalothorax black, probably in life covered with white iridescent scales as a few remain about eyes, lateral stripes of white scales on posterior half, crescent-shaped depression behind posterior eye row from which starts the short thoracic groove, thoracic portion slopes gradually from groove half way to posterior margin when it falls abruptly, many very long black hairs about anterior eye row, between and below small eyes are two pairs of long bristles; eyes, eye area covers about one-third of carapace, anterior eye row recurved by upper margins, a.l.e. more than half the diameter of a.m.e., small eyes nearer a.l.e. than to dorsal eyes, a.l.e. and p.l.e. subequal, third row of eyes not on extreme margin of carapace; quadrangle of lateral eyes narrower behind; clypeus retreating, equal to radius of a.m.e.; mandibles dark brown, covered with white scales, very slightly convex, fang groove short, slightly oblique, superior margin with two small teeth and a single row of stiff short hairs from base of fang to teeth, inferior margin with one small tooth, fang short with a very wide base; labium pale, longer than wide, with upper margin evenly curved; maxillae two-thirds longer than labium, tips rounded and much widened; sternum gray, almost round; abdomen dark gray with scattered long black hairs, about the middle a large spot of white iridescent scales and each side a much larger spot of black hairs, posterior is a pair of smaller black spots, middle and sides with scattered gray and white scales, venter pale gray with two pairs of faint

darker gray stripes; legs broken, 3-4-1-2, trochanters white, I pair enlarged, femur gray, other joints paler, thickly covered with white scales and very long black hairs but not thick enough to be called a fringe, II pair slightly enlarged, pale gray with some white scales and long hairs as on I pair, III and IV pairs, femora basal half white, all joints with long black hairs and white iridescent scales, spines, I and II pairs, patella, 0, tibia, ventral, 2-2-2, lateral, 2-2, metatarsus, ventral, 2-2, lateral, 2, III and IV pairs, patella, lateral, 2, tibia, ventral, 2 apical, lateral, 1-1, metatarsus, apical and median whorls; palpus short, seen from above patella twice as long as tibia, cymbium dark, covered with coarse dark hairs, tip of femur, patella and base of tibia covered with a thick mass of white iridescent scales, tibial apophysis small, seen laterally with a sharp point but ventrally shows only an incurving tip, ventral apophysis triangular and ventral surface covered with short black hairs; palpal organ extends in a lobe and rests against the ventral lobe of the tibia, embolus very short and straight.

Female. Length, 6.0 mm., ceph. 2.6 mm., abd. 3.3 mm.

Cephalothorax dark shining brown, with no hairs, crescent-shaped depression between posterior eye row, almost black anterior to depression, thoracic groove short; eyes, mandibles, labium and maxillae same as in male; abdomen a broad oval, dark brown with minute pale spots which may have been base of hairs that have been rubbed off, a median pale spot one third from base, and a pair of widely separated diagonal lateral bars on posterior half connected with a very narrow lateral pale line, sides pale, venter dark gray with four narrow pale lines, the outer pair meeting above the spinnerets; spinnerets slender and the inferior pair close together; legs, III right missing, 3-4-1-2, anterior pairs darker and heavier, trochanters covered with white scales, I and II femora with dark ventral distal spots which extend on sides; spines same as on male but prolateral spine on II patella; epigynum a pair of small oval openings more than a diameter anterior to fold, and separated by more than a diameter; one each side are dark round sacs beneath the skin.

Holotype ♂ Cuba; Soledad, May 1936, (Darlington).

Allotype ♀ Cuba; Soledad, May 1936, (Darlington).

Paratype ♂ Soledad, August 1931, (Banks).

Corythalia squamata differs from the other species found in Cuba in the scant fringe on the legs, the long hairs, and in the many iridescent scales on the mandibles and legs. It is very hairy. The embolus is much longer than in the other species but the abdominal markings are similar in all five species. The number of teeth on the fang groove is a

very variable character in this genus. *Corythalia squamata* has two teeth on the superior margin, the same as *C. signata* (Banks) from Puerto Rico. *C. emertoni* has no teeth on either margin, and *C. arcuata* Frang. has one on the inferior margin.

Genus PARDESSUS Peckham 1896

PARDESSUS FORMOSUS spec. nov.

Figures 283, 284

Male. Length, 4.5 mm., ceph. 2.1 mm., abd. 2.1 mm.

Cephalothorax dark brown black about anterior eye row and a second black band between dorsal eyes, white hairs about dorsal eyes and on posterior slopes, a fringe of short black hairs directed upward on lateral margin beneath dorsal eyes, cephalothorax very high, and the portion much swollen, seen from the side, highest between small eyes from which point it slopes to anterior eye row, and is apparently level for some distance posterior to dorsal eyes when it falls very abruptly to the posterior margin, a slight circular depression between dorsal eyes from which starts the very short thoracic groove, eyes, anterior row recurved, equidistant, a.l.e. less than half the diameter of a.m.e., with many long hairs on upper margins, small eyes nearer third than first row, p.l.e. slightly larger than a.l.e.; quadrangle of lateral eyes wider in front than behind; clypeus retreating, so that cephalothorax overhangs mandibles, below a.m.e. equal to a little more than a radius of a.m.e. with a thick fringe of short hairs on margin; mandibles very dark brown, iridescent, anterior surface flat, fang groove short, horizontal, superior margin with two small teeth; inferior margin with one large plate, fang short with a very thick base; labium brown, longer than wide, tip narrower than base; sternum brown, with a few long hairs, four-fifths as wide as long, anteriorly little wider than labium, pointed in front of IV coxae, IV coxae touching; abdomen oval, dull brown with a basal pale stripe and a vague pattern of black on dorsum, covered with long and short hairs and much smaller iridescent scales, muscle spots distinct, venter dull grayish-brown with four widely separated stripes of paler dots; legs, 3-4-1-2, III left missing, brown, I and II pairs enlarged, prolateral side of femora and tibiae with iridescent scales, patella, tibia and metatarsus thickly covered with black hairs and a heavy ventral fringe of black hairs, spines, patella, prolateral, 1, tibia, dorsal, 0, ventral, 2-2-2, middle and basal pairs long, prolateral, 2, metatarsus,

dorsal, 0, ventral, 2-2, basal pair very long, prolateral, 2, III femur with a dorsal crest of short black hairs, ventral fringe on patella, tibia and metatarsus, spines, patella, prolateral, 1, retrolateral, 1, tibia, dorsal, 1 basal, IV patella plus tibia not as long as III patella plus tibia, IV tibia with a dorsal basal spine, metatarsus with three whorls; palpus shorter than cephalothorax, femur with a dorsal crest of black hairs, patella not as long as diameter of joint and tibia even shorter, tibial apophysis seen laterally is a broad dark truncate lobe that rests against the cymbium, cymbium with a prolateral fringe of long black hairs, almost twice as long as tibia plus patella, palpal organ almost as long as cymbium with a semi-transparent lobe that projects from the plane of the palpus.

Holotype ♂ Cuba; Mountains North of Imias, 3,000-4,000 feet, 25-28 July, 1936, (Darlington).

With some hesitation this species is placed in the genus *Pardessus*. The genus was founded by Peckham for four species known only from females. Because of the swollen cephalothorax, it can not be placed in the genus *Corythalia*, and as the dorsal eyes are not on the extreme margin of the carapace, it does not belong in *Bythocrotus*, a genus found in Haiti.

Genus PLEXIPPUS C.L. Koch 1850

PLEXIPPUS PAYKULLI (Audouin)

Attus paykulli Audouin, in Savigny, Descr. de l'Égypte, 1827, **22**, p. 172.

Plexippus paykulli Petrunkevitch, 1930, p. 156, figs. 140-143.

A common cosmotropical species. It is found in southern Florida and Bermuda, and has been taken at various places in Cuba. Very good figures are given in the Biologia Centrali-America, 1901, **2**, p. 240, pl. 20, fig. 21.

Sub-family PELLEENINAE

Genus PELLEENES Simon 1876

PELLEENES CORONATUS (Hentz)

Attus coronatus Hentz, 1846, p. 361, pl. 22, fig. 1.

Pellenes coronatus, Peckham, 1909, p. 545, pl. 45, fig. 3.

This species belongs to the section of the genus in which the males have two long, heavy spatulate spines on the prolateral side of the first

tibia. These are lacking in the female which is recognized by the shape of the epigynum. It is found in the southern part of the United States and as far north as Long Island, New York; also in Mexico.

♂ Cuba; Soledad, 1-11 August, 1934, (Darlington).

♀ Cuba; Havana, (Cervera).

PELLENES TRANSLATUS Peckham

Pellenes translatus Peckham, 1901, p. 11, pl. 3, fig. 6.

Pellenes facetus Petrunkevitch, 1930, p. 181, figs. 163-164.

Peckham described this species from a single male collected at Mandeville, Jamaica by T.D.A. Cockerell, and the type is not in the Peckham Collection now at the Museum of Comparative Zoology. He states in the original description that the specimen had been rubbed, and he gives a detailed description of the markings when dry. Emerton's drawing was made when the specimen was in alcohol. The female was described by Petrunkevitch as *Pellenes facetus* from a single specimen from Puerto Rico. Both males and females have been found at Havana. Both sexes have the same thoracic markings, the cephalic portion dark, and thickly covered with faun-colored hairs; thoracic part with a dark triangle, the apex at the thoracic groove; the broad lateral band of white hairs is present only in the male. The amount of white hairs on the clypeus evidently varies as Peckham describes the white hairs as ending before reaching the a.m.e. and leaving a dark spot in the middle of the clypeus; this may have been because the specimen was badly rubbed. In the Cuban specimen, the white hairs continue across the clypeus.

The abdominal markings vary in the two sexes, which is not unusual in the genus. The male from Havana has a median pale stripe with a clouded mark at the basal half. The basal crescent of white extends to the spinnerets as described by Peckham.

The various parts of the palpus agree with the figures of the specimen from Jamaica with the exception of a line of bristles. In the figures, these bristles are on the cymbium just above the tibial apophysis. In the Cuban specimen, they are on the ventral side of the tibia and extend on to the palpal organ. Even if the position of this group of bristles is constant, it is hardly enough to warrant the creation of a new species for the Cuban specimens.

Pellenes translatus belongs to the section of the genus with the first leg not fringed and the third patella not modified. In the Peckham

Collection there was a male wrongly identified as *Pellenes agilis* (Banks). This species is found in Florida and the first pair of legs has a heavy fringe of hairs.

♂ Cuba; Havana, (Cervera).

♀ Cuba; Havana, 12 June, 1924, (Banks).

♂ Cuba; Havana, (Baker), Peckham Coll.

♀ Cuba; Soledad, August 1931, (Banks).

♂ Cuba; Soledad, 11 August, 1934, (Darlington).

Sub-family DENDRYPHANTINAE

Genus HENTZIA Marx 1883

Hentzia, Marx, 1883, p. 26.

Wala, Keyserling, 1884, p. 516.

Anoka, Peckham, Proc. Zool. Soc. London. 1894, p. 701.

Anoka, F.O.P. Cambridge, 1901, p. 255.

This is another genus in which the teeth on the fang groove differ in the male and female. The male often has two forms of mandibles, one long and porrect, with the fang correspondingly long and often sinuous, and the other with the mandibles vertical and short. The teeth on the fang groove are the same in both forms. In the female, the mandibles are short and vertical and the tooth on the inferior margin is always bicuspid. In a long series of *Hentzia palmarum* (Hentz), the number of teeth on the superior margin also varies. In some cases there is but one tooth on one mandible and two on the other, but the relative position of the tooth on the inferior margin is apparently constant. The single tooth on the lower margin varies with the species. It may be large and bicuspid or long and sharp. The spines on the anterior and posterior legs are also found to be variable. Petrunkevitch uses in his table for separating the West Indian species, the presence or absence of a prolateral spine on the first patella. This is more often found on the female than on the male, but from the material seen, it is not constant in either sex.

In the Biol. Centr. Amer., F.O.P. Cambridge gives a description of the genus apparently based on the two species known to him and he uses in his key for classification, the ventral spines on the fourth tibia, two apical and one basal. The apical pair is always present but the basal spine is often wanting. He also notes the number of spines in the apical whorl of the fourth metatarsus. In the species found in North America, there are always four, two ventral and two lateral.

The specific differences in the males are found in the position of the teeth on the fang groove and in the size and shape of the tibial apophysis of the palpus. Apparently there is little difference in the relative length of tibia and patella of the palpus. In the female, the epigynum varies in the position of the openings, round or oval, horizontal or oblique, separated by a diameter or less, and the epigastric fold, straight or deeply indented.

HENTZIA ANTILLANA spec. nov.

Figures 285, 289, 294

Male. Length, 4.6 mm., ceph. 2.0 mm., abd. 2.6 mm., mand. 2.1 mm.

Cephalothorax brown, black around eyes, with lateral stripes of white hairs which start as a very narrow stripe from the clypeus and widen to cover the entire sides, a pair of dark spots directly posterior to a.m.e., rather indistinct in dark specimens but very distinct in pale ones, thoracic groove short; eyes, anterior row recurved, a.m.e. almost touching, separated from a.l.e. by about a radius of latter, small eyes nearer first than third row, a.l.e. and p.l.e. subequal; clypeus very narrow below a.m.e. and covered with white hairs; mandibles slightly longer than cephalothorax, porrect, upper surface pale, flat and slightly corrugate, outer margins parallel and only slightly narrower at tip than at base, scant fringe of white hairs on outer margin, heaviest at base, superior margin of fang groove with two teeth, first, the larger, about one-third from base of fang, second, much smaller, about the middle of groove, inferior margin with a strong bicuspid tooth almost opposite first tooth on the opposite margin but slightly nearer base of fang and directed towards the fang, fang as long as groove; labium dark brown; maxillae about twice as long as labium with a distinct outer corner on upper margin but not a lobe; sternum pale, very much narrowed between first coxae; abdomen with a broad brown median stripe with a narrow stripe of white hairs each side, sides brown, venter pale; legs, I pair longest and heaviest, pale brown with a broad prolateral darker stripe, tarsi pale, fringe of clavate hairs on ventral side of femur extending on patella, spines, patella, 0, tibia, ventral, 2-2-2, not opposite or paired, prolateral spines heavier with recurved tips, first at middle of the joint, retro-lateral spines very small and first a third above the base, II, III and IV pairs pale, spines, II pair, patella, 0, tibia, ventral, 2-2-1, IV tibia, ventral, 2 distal, 1 basal; palpus not as long as cephalo-

thorax, femur pale with a scant fringe of white hairs near the base, patella and tibia of equal length, tibial apophysis small with a blunt tip, tip of cymbium flattened and surrounded by a chitinous rim.

Female. Length, 5.0 mm., ceph. 2.1 mm., abd. 3.0 mm.

Cephalothorax an even chestnut-brown with a few white scales, not the lateral stripes as in the male, thoracic groove short; eyes as in the male, with the usual group of three curved bristles below the small eyes; mandibles vertical, brown, flattened in front with white scales and long white hairs, superior margin of fang groove with two small teeth, inferior margin of groove with one large bicuspid tooth; maxillae with rounded corners; sternum same as in male; abdomen with a brown mottled pattern on a pale ground, with a very distinct cross bar near tip, venter pale; legs, I pair heaviest, pale brown, spines, patella, 0, tibia, ventral, 2-2-2, not opposite but nearly the same size, prolateral basal spine one-third above the base, retrolateral spine just above the base, metatarsus, ventral, 2-2, II, III and IV pairs pale, spines, II tibia, ventral, 2-2-2, IV tibia, ventral, distal, 2, basal 1; epigynum, openings oval, strongly oblique, separated by less than their diameter, leading to dark coils near the fold.

Holotype ♂ Antigua, June, 1918, (Univ. Iowa Exped.).

Allotype ♀ Antigua, June, 1918, (Univ. Iowa Exped.).

Paratypes ♂ ♀ Antigua, (Univ. Iowa Exped.).

Paratypes ♂ ♀ Virgin Islands, Haiti and Cuba.

It is probable from the description that Petrunkevitch gives of *Wala vernalis* (Peckham) (Trans. Conn. Acad., 1930, 31, p. 139, figures 120-129) that he had this species. *Hentzia antillana* is very different from *Anoka vernalis* Peckham, co-types of which are in the Museum of Comparative Zoology Collection. Peckham's description in the Proc. Zoöl. Soc. London, 1894, p. 701, agrees perfectly with the specimens, "falces long, horizontal, inner edges parallel for about one half their length and then diverge; at this point is a tooth, which points forwards and crosses the one on the opposite falx. The fang is long and slender and it is slightly curved at the extremity." The distal half of the mandible is plainly narrowed on the inner margin, so that the tip is about one half as wide as at the base of the fang. The bicuspid tooth is large and is very close to the base of the fang. Of the three specimens in the collection identified by Peckham, two are from St. Vincent and one is from the Barbados; all have these two teeth only. The fang is bent at right angles near the base, gradually decreasing in size with the tip curved. The three pairs of spines on the first tibia are not opposite and the basal pair are widely separated, the

prolateral spine is just below the middle and the retrolateral is less than a third from the base. *Hentzia vernalis* (Peckham) has the tooth on the lower margin of the fang groove much nearer the base of the fang, the tibial apophysis of the palpus is long, slender and sinuous, and the tip of the mandible much narrower than the base. (Cf. Fig. 288)

HENTZIA AUDAX spec. nov.

Figures 286, 290, 292

Male. Length 5.8 mm., ceph. 2.8 mm., abd. 3.2 mm., mand. 2.0 mm.

Cephalothorax bright reddish-brown with wide lateral stripes of white hairs from anterior eye row to posterior margin, a dark spot in middle of eye area, sides evenly rounded, thoracic groove very short, dorsal eyes not on extreme margin of carapace; eyes surrounded with black, anterior row recurved by upper margins, a.m.e. separated by almost a radius and from a.l.e. by more, small eyes nearer first than third row, p.l.e. smaller than a.l.e.; quadrangle of lateral eyes slightly wider behind; clypeus very narrow below a.m.e.; mandibles brown, more than two-thirds as long as cephalothorax, slightly divergent, outer margins with a fringe of white hairs, heaviest at base, inner margin with a distinct carina, dorsal surface flat and slightly corrugate, superior margin of fang groove with two teeth, first near base of fang and second much smaller midway between first tooth and tooth on inferior margin, inferior margin with a large pointed tooth slightly nearer maxillae than to base of fang; fang as long as margin, slender and tip curved; maxillae slightly divergent with a distinct lobe on outer upper angle; sternum reddish-brown, oval, narrowed anteriorly to less than diameter of coxae; abdomen oval, dark brown with widely separated lateral stripes of white hairs, entire abdomen with scattered long white hairs, venter brown; legs, I pair dark brown, largest, femur flattened laterally, near distal end a fringe of clavate hairs that extend on patella, spines, patella, 1 prolateral, tibia, ventral, 2-2-2, middle and basal pairs not opposite, prolateral row spines longer with recurved tips, lateral, 0, metatarsus, ventral, 2-2, short, distal and submedian, II, III and IV pairs pale, IV tibia, ventral, 2 small distal, 0 basal, metatarsus, apical whorl of spines, 2 ventral, 2 lateral; palpus dark, not as long as cephalothorax, femur flattened laterally with no fringe of hairs, patella and tibia of about equal length, tibial apophysis dark and curved, not slender as in *Hentzia vernalis* (Peckham) (Cf. Fig. 287) and fitting in a depression on cymbium, palpal organ of the

characteristic type, widest above the middle, with the bulb filling the lower half and extending on tibia, embolus a slender black tube which starts from the lower half of the bulb and follows the contour of the cavity with the last half in a groove on the tip of the cymbium above the cavity.

Female. Length, 5.8 mm., ceph. 2.2 mm., abd. 4.0 mm.

Cephalothorax bright reddish-brown, paler in eye area, scattered white hairs on sides instead of a definite stripe of white hairs as in the male, usual group of three curved bristles below small eyes; eyes same as in male; mandibles brown, vertical, anterior surface flattened, fang groove only slightly oblique, one small tooth on superior margin, large bicuspid tooth on inferior margin; labium brown, about twice as long as wide; maxillae brown, one-third longer than labium with outer upper angle rounded, not prolonged in a lobe as in the male; sternum same as in male; abdomen reddish-brown, partly broken by three pairs of diagonal white lines which do not meet in the middle, a vague median dark stripe divided at base, sides mottled, venter paler; legs, I pair heaviest, reddish-brown, femur enlarged, spines, patella, 1 prolateral, tibia, ventral, 2-2-2, unmatched and not opposite, spines on inner row longer with recurved tips, on outer row very short and much smaller, lateral, 0, metatarsus, ventral, 2-2, II, III and IV pairs pale, spines, II pair, patella, 0, tibia, ventral, 2 apical, 1 submedian, IV tibia, ventral, 2 apical, 0 basal; epigynum of the usual type as figured, openings oval, separated by less than a diameter, almost horizontal, margin above the fold semicircular.

Holotype ♂ Cuba; Pico Turquino, 6,000 feet, 16-21 June, 1936, (Darlington).

Allotype ♀ Cuba; Pico Turquino, 6,000 feet, 16-21 June, 1936, (Darlington).

Paratypes 3 ♂ Cuba; Pico Turquino, 6,000 feet, (Darlington).

Hentzia audax is larger than others of the genus; the tooth on the inferior margin of the fang groove is sharp, not bicuspid, and is midway between the base and the maxillae; the tibial apophysis is much heavier than others in the genus and lacks the curved tip.

HENTZIA MITRATA (Hentz)

Attus mitratus Hentz, 1846, p. 363, pl. 22, fig. 9.

Wala mitrata, Peckham, 1909, p. 507, pl. 41, fig. 12, pl. 42, fig. 2.

A common species from Ottawa, Canada, south to Florida and west

to Wisconsin. Cambridge did not find it in Central America and Petrunkevitch did not report it from Puerto Rico.

♀ Cuba; Soledad, June, 1925, (Salt).

HENTZIA PALMARUM (Hentz)

Epiblemum palmarum Hentz, Amer. Journ. Sci. Art., 1832, p. 108; reprint, p. 71, pl. 9, fig. 16.

Wala palmarum, Peckham, 1909, p. 508, pl. 42, fig. 1.

This is a common species in the eastern part of the United States from Massachusetts to Florida and west to Texas. Peckham figures and describes the two forms of males. Petrunkevitch did not find it in Puerto Rico.

♂ ♀ Cuba; Havana, (Cervera).

♀ Cuba; Holguin, Peckham Coll.

♂ ♀ Cuba; Soledad, August, 1931, (Banks).

♂ ♀ Cuba; Soledad, Trinidad Mountains, March, 1925, (Salt).

♂ ♀ Cuba; Soledad, February, 1925, (Salt and Myers).

HENTZIA TIBIALIS spec. nov.

Figures 291, 295

Male. Length, 5.1 mm., (exclusive of mand.), ceph. 2.0 mm., abd. 3.2 mm., mand. 1.1 mm.

Cephalothorax bright brown, black about eyes, a wide lateral stripe of white hairs from a.l.e. to posterior margin, golden scales between and below lateral eyes, two or three slender black bristles posterior to a.l.e., thoracic groove very short; eyes, a.m.e. largest, subcontiguous, separated from a.l.e. by more than a radius of a.l.e., small eyes nearer first than third row, a.l.e. and p.l.e. subequal; quadrangle of lateral eyes as wide behind as in front; clypeus wanting below a.m.e.; mandibles porrect, slightly narrower at tip than at base, flattened dorsally and upper surface corrugate, no lateral fringe of long hairs, superior margin of fang groove with two teeth, the larger nearer the base of the fang and a very small tooth opposite tooth on inferior margin, inferior margin with one large, sharp tooth two-thirds nearer origin of fang than base of mandible, fang long and sinuous; labium nearly twice as long as wide; maxillae dilate at outer upper angle with a blunt tooth on anterior margin above the angle, apex truncate; sternum narrowed

between I coxae to width of labium, widest between II and III coxae, IV coxae subcontiguous; abdomen, dorsum an iridescent bronze with a vague median branching dark stripe, a narrow lateral stripe of white scales meets above the spinnerets, venter dark; legs, I pair dark and larger than others, femur enlarged and flattened laterally, patella and tibia with scattered white scales, no ventral fringe on clavate hairs on tip of femur and patella, spines, patella, lateral, 0, tibia, ventral, 2-2-2, all less than diameter of joint, lateral, 0, metatarsus, ventral, 2-2, II, III and IV pairs cream white; palpus, femur, patella, and tibia white and covered with long white hairs, basal part of tarsus white, tip dark and flattened, tibia two-thirds as long as patella, tibial apophysis dark, broad and bicuspid, with lower cusp longer and sharper, palpal organ very dark, broad and deeply bilobed at apex, embolus rather shorter and heavier than in *H. palmarum* or *antillana*.

Female. Length, 6.7 mm., ceph. 2.5 mm., abd. 4.5 mm.

Cephalothorax bright brown with faint dark stripes from p.l.e. to posterior margin where they meet, lateral stripes of white hairs rather indistinct, white hairs above and between a.m.e., a pair of curved rod-like bristles below small eyes, cephalothorax narrower than in male; clypeus wanting below a.m.e. and covered with white hairs and scales below a.l.e.; mandibles vertical, superior margin of fang groove with two teeth, one nearer fang slightly larger, inferior margin with large bicuspid tooth, fang rather short; labium dark, twice as long as wide; maxillae long, only slightly widened at tip, not dilate as in male, apex rounded, not truncate; sternum dark, oval, anteriorly as wide as labium widest between II coxae, IV coxae contiguous; abdomen pale, covered with white scales, with a median dark stripe irregularly branched, including a pair of pale spots at basal third, sides irregularly spotted with small dark dots, venter pale; legs, I pair missing, others pale, IV tibia, ventral, 2 spines at apex, 1 basal; epigynum small for so large a spider, showing the same characters as others of the genus; a pair of circular openings, separated by about a radius, anterior to a dark curve above the fold.

Holotype ♂ Cuba; Soledad, 11 August, 1931, (Weber).

Allotype ♀ Cuba; Soledad, 11 August, 1931, (Weber).

Paratype ♀ Cuba; Soledad, August 1931, (Worley).

This species is much larger than *Hentzia palmarum* (Hentz) but the epigynum is smaller. In the male, the tibial apophysis of the palpus is very different as it has two cusps instead of one slender point.

Genus *ICIUS* Simon 1874*ICIUS WICKHAM* Peckham

Figure 296

Icius wickhami Peckham, 1894, p. 109, pl. 10, fig. 8.*Icius floridanus* Banks, 1895, p. 100.

Male. Length, 3.0 mm., ceph. 1.6 mm., abd. 1.6 mm.

Cephalothorax dark brown with scattered iridescent scales, no marginal pale stripe, moderately high, widest behind dorsal eyes, eye area level, then sloping gently to groove, where it slopes abruptly to posterior margin, thoracic groove reduced to a small dot; eyes, anterior row recurved by upper margins, a.m.e. very large, almost touching, a.l.e. less than half the diameter of a.m.e. and separated from them by less than a radius of a.l.e., small eyes one third nearer first than third row, dorsal eyes subequal with a.l.e.; eye area covers more than one-third of carapace; quadrangle of lateral eyes slightly wider behind than in front and more than half as wide as long; clypeus wanting beneath a.m.e., retreating with a very few iridescent scales; mandibles dark brown, vertical, fang groove short, superior margin with two small teeth and a row of curved setae from teeth to base of fang, inferior margin with a large bicuspid tooth opposite teeth on upper margin; labium slightly longer than wide; maxillae twice as long as labium with tips slightly dilate; sternum oval, about twice as long as wide, anteriorly narrowed to width of labium, widest between II coxae, IV coxae contiguous; abdomen very dark, almost black with scattered white scales, venter dark; legs, 1-4-2-3, I pair heaviest, coxa dark, largest, trochanter one half as long as coxa, femur dark, iridescent, flattened laterally so that dorsal edge is a rather sharp ridge, other joints paler, patella and tibia flattened dorsally, patella almost as long as tibia, both rather slender with a broad dorsal pale stripe almost covered with white scales, metatarsus dark, two-thirds as long as tibia, tarsus pale, spines, femur, 4 short inconspicuous spines on ridge, patella, 0, tibia, ventral, 2-2-2, short, less than half a diameter of the joint, not opposite, first prolateral spine about middle of the joint, lateral, 0, metatarsus, ventral, 2-2, not basal, lateral, 0, II, III and IV coxae and trochanters pale, all other joints dark, with a broad median pale stripe which is partly covered with white scales, stripes less distinct on femora, IV metatarsus a little shorter than IV tibia, spines on posterior legs very small and inconspicuous; palpus short, femur as long as patella plus tibia plus tarsus, tibial apophysis a

sharp black point, tip of cymbium flattened, palpal organ well figured by Peckham.

Female. Length, 3.5 mm., ceph. 1.5 mm., abd. 2.0 mm.

Cephalothorax bright chestnut-brown, black about the eyes, with scattered white iridescent scales, same shape as in male; eyes, mouth parts and sternum same as in male; abdomen thickly covered with white iridescent scales, except at tip of abdomen where they have been rubbed and the tip appears a dull brown, venter pale brown; legs, 1-4-2-3, paler than in male, I pair heaviest, femur bright brown with an indistinct median pale stripe, enlarged and flattened laterally, patella and tibia subequal, pale with no stripe, spines same as in male but longer, II, III and IV bright yellow with a distinct median dark stripe and narrower dark lateral stripes, posterior pairs with very few spines; epigynum with a deep notch above the epigastric fold, characteristic of *Dendryphantes*; the openings can be seen, and the dark parts beneath the skin form an area twice as long as wide.

Allotype ♀ Cuba; Soledad, August 1931, (Banks).

♂ Cuba; Havana, (Cervera).

♂ ♀ Cuba; Trinidad Mountains, Mina Carlota, 19 March, 1925, (Salt and Myers).

This species was described from two badly rubbed males from Eleuthera, an island of the Bahamas. They are now in the collection of the Museum of Comparative Zoology. About the same time, Mr. Banks received a male from Florida which he described as *Icius floridanus*. Later Peckham, in the Attidae of North America, Trans. Wisc. Acad., 1909, 16, p. 502, pl. 41, fig. 8, gives a short description of the species, and calls attention to the bicuspid tooth on the lower margin of the fang groove. Because of this tooth, it can not be placed in the genus *Icius* but until the genera of the West Indian Salticidae are better known, it is thought best to leave it there. The arrangement of spines on the first tibia is characteristic of the genus *Dendryphantes* but the rather flat cephalothorax and the bicuspid tooth excludes it from that genus.

Genus METAPHIDIPPUS F.O.P. Cambridge 1901

METAPHIDIPPUS PROXIMUS (Peckham)

Dendryphantes proximus Peckham, 1901a, p. 327, pl. 28, fig. 3.

Dendryphantes prudens Peckham, 1901b, p. 15, pl. 4, fig. 13.

Peckham, in the original description, compares this species to

Dendryphantes capitatus (Hentz) to which it is closely related and it is evidently the Cuban representative of that group. The males are easily separated. In *M. capitatus*, the tip of the embolus is truncate with one angle prolonged in a long, slender and incurving spine and the opposite angle little more than a sharp cusp. In *M. proximus* the two angles are short, very little more than cusps, with one slightly longer. The females are not as easily separated. In the Cuban species the notch above the fold is a little deeper.

The species is evidently very abundant considering the number collected at Havana, Soledad and Holguin. None have been seen from the eastern end of the island. The specimens from Santiago de las Vegas, identified by Banks as *Dendryphantes octarus* (Hentz), are this species.

♂ ♀ Cuba; Havana, (Cervera).

♂ ♀ Cuba; Holguin, (Parish), Peckham Coll.

♂ ♀ Cuba; Soledad.

♂ ♀ Cuba; Santiago de las Vegas, (Baker), Banks Coll.

Genus PARAPHIDIPPUS F.O.P. Cambridge 1901.

PARAPHIDIPPUS MILITARIS (Hentz)

Attus militaris Hentz, 1845, p. 201, pl. 17, figs. 10, 11.

Dendryphantes militaris, Peckham, 1909, p. 460, pl. 37, fig. 1.

A common species from Canada to Mexico. Petrunkevitch did not find it in Puerto Rico.

♂ ♀ Cuba; Havana, (Baker), Peckham Coll.

♂ ♀ Cuba; Soledad, 1-11 August, 1934, (Darlington).

♀ Cuba; Santiago de las Vegas, (Hauser and Horne), Banks Coll.

Genus PHIDIPPUS C.L. Koch 1846

PHIDIPPUS AUDAX (Hentz)

Attus audax Hentz, 1845, p. 199, pl. 17, figs. 6, 7.

Phidippus regius C. L. Koch, 1846, **13**, p. 146, pl. 456, fig. 1203.

Phidippus audax, Peckham, 1909, p. 389, pl. 29, fig. 2.

This species is found from Canada south to Florida. It varies greatly in size, in the amount of fringe on the first leg, and in the size and color of the abdominal markings. Because of these variations, it

has received many names. Specimens from the south are larger, the first pair of legs proportionally longer with a heavier fringe of hairs on the first tibia, but all have the same palpus. No difference can be found between the Florida and Cuban specimens. Peckham gives excellent figures of the palpus.

It is abundant in all collections from Havana and central Cuba. Petrunkevitch did not find it in Puerto Rico or the Virgin Islands.

PHIDIPPUS CARDINALIS (Hentz)

Attus cardinalis Hentz, 1845, p. 200, pl. 17, fig. 9.

Phidippus cardinalis, Peckham, 1909, p. 393, pl. 29, fig. 5.

Franganillo reports this species from several localities in Cuba. In Banks Coll. there is a female from Havana.

PHIDIPPUS MINIATUS (Peckham)

Attus miniatus Peckham, 1883, p. 15, pl. 2, fig. 11.

Phidippus miniatus, id., 1909, p. 426, pl. 32, fig. 5.

This species is known only from females. In the collection, there are specimens from Holguin, Pinar del Rio, and Bolondron, identified by Peckham, as well as many others from Havana, Soledad and Santiago de las Vegas. It is possible that it may prove to be only a color variety of *Phidippus audax*.

PHIDIPPUS VARIEGATUS (Lucas)

Salticus variegatus Lucas, Ann. Soc. Ent. France, 1833, 2, p. 473, pl. 18, figs. 1-7.

Phidippus variegatus, Peckham, 1909, p. 390, pl. 29, fig. 1.

Described from specimens from New Orleans, Louisiana, this species has been recognized from several of the southern states. Peckham in his revision of the Attidae of North America, separates it from *Phidippus audax* (Hentz) only by the larger size and the wide lateral stripes of white hairs on the cephalothorax. It is not improbable that when the genus is revised again, *audax*, *miniatus* and *variegatus* will prove only color varieties of the same species. *P. variegatus* is the oldest name.

Sub-family SITTICINAE

Genus NEON Simon 1876

NEON NIGRICEPS spec. nov.

Figures 293, 297

Male. Length, 2.0 mm., ceph. 0.9 mm., abd. 0.9 mm.

Cephalothorax shining jet black with a narrow pale yellow median stripe from dorsal eyes to posterior margin, anteriorly it is continued as an indistinct narrow line of white hairs to anterior eye row, a pale marginal stripe from below dorsal eyes, gradually widening at posterior margin where it joins the median stripe, cephalothorax high, cephalic portion level and sides almost parallel, thoracic portion continuing in same plane, then abruptly sloping to posterior margin, no thoracic groove; eyes cover two-fifths of cephalothorax, anterior row straight, eyes touching, a.m.e. nearly twice the diameter of a.l.e., a scant fringe of long hairs on upper margin, small eyes nearer first than third row and not on extreme margin of carapace, p.l.e. and a.l.e. subequal, p.l.e. on margin of carapace; quadrangle of lateral eyes wider in front than behind; clypeus below a.m.e. less than a radius of a.m.e.; mandibles black, small, vertical, one small tooth on inferior margin of fang groove, fang small and weak; labium slightly wider than long; maxillae two-thirds as wide as long, sides almost parallel; sternum colorless, two-thirds as wide as long, slightly convex, only slightly narrowed in front of second coxae, fourth coxae separated by less than a diameter; abdomen with four equal black stripes separated by three pale stripes of the same width, many coarse hairs, venter pale, spinnerets black; legs, 1-4-3-2, colorless and rather short, I pair slightly enlarged, spines, tibia, ventral, 2-2-2, middle pair half the length of joint, first pair half their length above base, third pair their length below tip, lateral, 0, metatarsus, ventral, 2-2, II tibia, ventral, 1-1, serially metatarsus, ventral, 2-2, posterior or tibiae with few spines about tip in an interrupted whorl; palpus short, tip of femur, patella and tibia covered with white hairs, tibia shorter than patella, less than half as long as wide, with a short, truncate apophysis beneath palpal organ; palpal organ distorted and protruding from cavity, probably the result of the killing agent, embolus appears as a short, black spine near the tip and directed outward.

Female the same size and marked the same as the male, except that the median yellow stripe extends about half way between the eye rows;

palpus with the last two joints slightly enlarged; epigynum shows two darkened oval areas, with a pair of circular clear spots at the base which are probably the openings, anteriorly is a pair of oblique dark ovals close together.

Holotype ♂ Cuba; Soledad, Vilches pasture, 3 July, 1932, (Bates and Fairchild).

Allotype ♀ Cuba; Soledad, Vilches pasture, 3 July, 1932, (Bates and Fairchild).

Paratypes 3 ♀ Cuba; Soledad, Vilches pasture, July 1932, (Bates and Fairchild).

This small species was collected from a Berlese trap. It is smaller than *Ncon nelli* Peckham found in North America, and has quite different markings as well as distinct palpus and epigynum.

Sub-family MARPISSINAE

Genus HYCTIA Simon 1876

HYCTIA PIKEI Peckham

Hycia pikei Peckham, 1889, p. 79, pl. 1, fig. 59, pl. 4, fig. 59, pl. 5, fig. 59; id., 1909, p. 488, pl. 39, fig. 7, pl. 40, fig. 8.

This species is found on the coast from Massachusetts to Florida. In the Peckham Collection there are males from Holguin collected by Parish and from Havana collected by Baker. In a small collection from Havana by Cervera are both males and females. It has been found during July at various places about Soledad.

Genus MARPISSA C. Koch 1846

MARPISSA BIVITTATA (Dufour)

Salticus bivittatus Dufour, Ann. Sci. Nat., 1831, p. 15, pl. 2, fig. 5.

Salticus melanognathus Lucas, 1838, p. 29, pl. 7, fig. 4.

Marpissa melanognathus, Peckham, 1909, p. 483, pl. 39, fig. 3, pl. 40, fig. 3.

This is a common cosmopolitan species and has been described and figured many times. It is found in the southern part of the United States, Central America, Panama, Brazil, Paraguay, Bermuda, and has been reported from most of the islands in the West Indies. Petrunkevitch figures and describes it in his paper on Puerto Rican Spiders.

♂ ♀ Cuba; Havana, (Baker), Banks Coll.

♂ Cuba; Trinidad Mountains, 10 March, 1925, (Salt).

♂ Cuba; Pina del Rio, San Vicente, July, (Archer).

♀ Cuba; Soledad, 8 August, 1931, (Worley).

APPENDIX

Other Spiders Reported From Cuba

For the sake of completeness, all other spiders reported from Cuba are given below in a systematic list. In no case have specimens been examined. An asterisk (*) before the name indicates Cuba as the type locality. In every case the author and year of description are given. A second name and date is a reference to the person reporting the species from Cuba. In some cases, at least, new species will prove to be synonyms, and in others species from various parts of the Old World or the northern United States will prove to be errors of determination.

Sub-order MYGALOMORPHAE

Family BARYCHELIDAE

Sub-family DIPLOTHELINAE

**DIMAZION FULVUS* Frang., 1926

Sub-family LEPTOPELMATINAE

**BISTRIGUS MUTICUS* Frang., 1930

**LEPTOPELMA CUBANA* Frang., 1930

PSALISTOPS COROZALI Petr., 1929; Frang., 1934

**STOTHIS MACULATA* Frang., 1930

**STOTHIS SPINOSA* Frang., 1930

**TROGLOTHELE COECA* Fage, 1929

Family THERAPHOSIDAE

Sub-family ISCHNOCOLINAE

**CYRTOPHOLIS ANACANTHUS* Frang., 1934

**CYRTOPHOLIS DEBILIS* Frang., 1931

**CYRTOPHOLIS DEBILIS* *var. bispinosa* Frang., 1931

**CYRTOPHOLIS IMPLUMIS* Frang., 1931

**CYRTOPHOLIS INNOCUUS* (Ausserer), 1871

**CYRTOPHOLIS PLUMOSIS* Frang., 1931

**CYRTOPHOLIS UNISPINOSUS* Frang., 1926

**HAPALOPINUS CUBANUS* Simon, 1903

**ISCHNOCOLUS DENTICULATUS* Frang., 1930

SCHIZOPELMA BICARINATUM F. O. P. Camb., 1897; Frang., 1926

**STICHOPLASTUS OBSOLETUS* Frang., 1934

Sub-family THERAPHOSINAE

CITHARACANTHUS LONGIPES F. O. P. Cambr., 1897; Frang., 1934

*CITHARACANTHUS LONGIPES *var. niger* Frang., 1931

Sub-order ARACHNOMORPHAE

Family FILISTATIDAE

*FILISTATA CUBAECOLA Lucas, 1857

*FILISTATA POLITA Frang., 1936

FILISTATA PULCHELLA Simon; Frang., 1931

FILISTATA TESTACEA Latreille, 1810; Frang., 1931

Family OECOBIIDAE

OECOBIUS ANNULIPES Lucas, 1846; Frang., 1926

OECOBIUS CONCINNUS Simon, 1892; Frang., 1926

Family PISAURIDAE

*DOLOMEDES FUSCUS Frang., 1931

Family LYCOSIDAE

*LYCOSA OVALATA Frang., 1930

*LYCOSA ROSTRATA Frang., 1930

Family OXYOPIDAE

*SPHASUS POEYI Lucas, 1857

OXYOPES ARGYROTRICHUS Mello-Leitao; Frang., 1936

OXYOPES HETEROPHTHALMUS (Latreille), 1804; Frang., 1926

OXYOPES PALLIDUS (C. Koch), 1839; Frang., 1926

Family LEPTONETIDAE

Sub-family OCHYRO CERATINAE

*THEOTIMA FALLAX Fage, 1912

THEOTIMA RADIATA Simon, 1891; Fage, 1929

Family SICARIIDAE

Sub-family PLECTREURINAE

*PLECTREURYS GLOBOSA Frang., 1931

Sub-family SCYTODINAE

SCYTODES PALLIDA Dolsch.; Frang., 1926

SCYTODES THORACICA (Latreille), 1804; Roig., 1911

Family PHOLCIDAE

Sub-family PHOLCINAE

CROSSOPRIZA PRISTINA Simon; Frang., 1926

*CROSSOPRIZA SEX-SIGNATA Frang., 1926

*MODISIMUS COERULESCENS Frang., 1931

Family THERIDIIDAE

Sub-family LATRODECTINAE

*LATRODECTUS ALBOMACULATUS Frang., 1930 .

Sub-family ARGYRODINAE

CONOPISTHA ARGYRODES (Walck.); Frang., 1930

CONOPISTHA CANCELLATUS (Hentz) 1850; Roig, 1911

CONOPISTHA FURCATA O. P. CAMBR., 1898; Frang., 1930

Sub-family THERIDIINAE

THERIDION ANTILLANUM Simon, 1894; Frang., 1936

*THERIDION CASTANEUM Frang., 1931

*THERIDION FORMOSUM (Clerck), 1757 *var. serratum* Frang. 1936

*THERIDION FUSCUM Frang., 1930

THERIDION SIMILE (Clerck), 1757; Frang., 1930

*THERIDION TRIANGULARE Frang., 1936

Family LINYPHIIDAE

Sub-family LINYPHIINAE

*BATHYPHANTES SEMICINCTA Banks, 1914

Sub-family ERIGONINAE

*CERATINOPSIS RUBERRIMA Frang., 1926

Family ULOBORIDAE

Sub-family ULOBORINAE

- *ULOBORUS GENICULATUS (Olivier) *var. altissimus* Frang., 1926
- *ULOBORUS GENICULATUS (Olivier) *var. humilis* Frang., 1926
- *ULOBORUS GENICULATUS (Olivier) *var. quadripunctatus* Frang., 1926

- *ULOBORUS GENICULATUS (Olivier) *var. similis* Frang., 1926

Family DEINOPIDAE

- *DEINOPIS BITUBERCULATUS Frang., 1930
- *DEINOPIS TUBERCULATUS Frang., 1926

Family ARGIOPIDAE

Sub-family ARGIOPINAE

- *ARGIOPE ARGENTA Fabr. *var. nigra* Frang., 1926
- *GEO DECORATATA Thorell *var. varians* Frang., 1926
- *GEA INTEGRA Frang., 1930
- *GEA LINEATA Frang., 1926
- *GEA PARTITA Frang., 1930
- *GEA SUBARMATA Thorell *var. maculata* Frang., 1930

Sub-family ARANEINAE

- *ARANEUS AEQUIANGULUS Frang., 1930
- *ARANEUS AEQUIANGULUS *var. ochraceus* Frang., 1930
- *ARANEUS ANUNCINATUS Frang., 1930
- *ARANEUS ANUNCINATUS *var. depilosus* Frang., 1930
- *ARANEUS ANUNCINATUS *var. ochrorufus* Frang., 1931
- ARANEUS AUDAX (Blackwall), 1863; Frang., 1931
- *ARANEUS BIPUNCTATUS Frang., 1931
- *ARANEUS EXCAVATUS Frang., 1930
- *ARANEUS FISTULOSUS Frang., 1930
- *ARANEUS FULIGINEUS (Walck.) *var. romboidalis* Frang., 1930
- *ARANEUS FULIGINEUS (Walck.) *var. sanguineus* Frang., 1930
- *ARANEUS LINEATUS Frang., 1931
- *ARANEUS NEPHILOIDES O. P. Cambr., 1889, *var. trapezoidalis* Frang., 1930
- *ARANEUS NIGER Frang., 1936
- *ARANEUS PERFOLIATUS Frang., 1930

- ARANEUS SCLOPETARIUS Clerck, 1757; Frang., 1926
 ARANEUS SERICATUS Clerck, 1757; Frang., 1930
 *ARANEUS SULPHUREUS Frang., 1930
 *CUBANELLA NIDICOLA Frang., 1926 = NEOSCONA NIDICOLA (Frang.), 1936
 *CUBANELLA RECTA Frang., 1930 = NEOSCONA RECTA (Frang.), 1936
 CYCLOSA DIVERSA (O. P. Cambr.), 1894; Frang., 1936
 CYCLOSA INDEX O. P. Cambr., 1889; Frang., 1930
 *CYCLOSA QUADRITUBEROSA Frang., 1936
 *EDRICUS CRASSICAUDA (Keys.), 1865, *var.* albotuberculatus Frang., 1936
 *EDRICUS CRASSICAUDA *var.* nigrotuberculatus Frang., 1936
 *EDRICUS CRASSICAUDA *var.* ruber Frang., 1936
 *EUSTALA ANASTERA (Walck.), 1837, *var.* veriformis Frang., 1931
 *EUSTALA PROCURVA Frang., 1936
 *EUSTALA THORELLI (MacCook), 1893; Frang., 1936
 LARINIA LINEATA (Lucas), 1841; Frang., 1930
 *MANGORA FASCIOLATA Frang., 1936
 MANGORA PICTA O. P. Cambr., 1889; Frang., 1936
 MANGORA PLACIDA (Hentz), 1847; Frang., 1936
 MASTOPHORA CONIFERA (Holmb.); Frang., 1936
 MASTOPHORA CORNIGERA (Hentz), 1850; Frang., 1936
 MASTOPHORA EXTRAORDINARIS (Holmb.); Frang., 1936
 *NEOSCONA PARALELA Frang., 1931
 *SALASSIMA ALOBATA Frang., 1931 = EDRICUS?
 SINGA NITICOLA (C. Koch), 1845; Frang., 1926
 *SPINTHARIDIUS VIRIDIS Frang., 1926

Sub-family METINAE

- CHRYSOMETA TENUIPES (Keyserling), 1863; Frang., 1930
 *META SERRANA Frang., 1930
 PSEUDOMETA ALBOMACULATA (O. P. Cambr.), 1889; Frang., 1930
 PSEUDOMETA DECOLORATA (O. P. Cambr.), 1889; Frang., 1930

Sub-family TETRAGNATHINAE

- *ALCIMOSPHEXUS RUFONIGER (Frang.), 1930 = ACUSILAS
 TETRAGNATHA CYLINDRICA (Walck.), 1837; Frang., 1926
 TETRAGNATHA EXTENSA (Linn.), 1758; Frang., 1930
 TETRAGNATHA LABORIOSA Hentz, 1850; Frang., 1931
 TETRAGNATHA LONGA O. P. Cambr., 1889; Frang., 1930

TETRAGNATHA MEXICANA Keys., 1865; Frang., 1930

TETRAGNATHA TRICHODES Thorell, 1878; Frang., 1926

Sub-family GASTERACANTHINAE

*GASTERACANTHA CANCRIFORMIS *var. alba* Frang., 1936

*GASTERACANTHA CANCRIFORMIS (Linn.), 1767, *var. aurata* Frang., 1926

*GASTERACANTHA CANCRIFORMIS *var. nigra* Frang., 1926

GASTERACANTHA HEXACANTHA (Fabr.), 1787; Banks, 1909

*MICRATHENA LAMINARIS Frang., 1930

*MICRATHENA MAMMILLATA (Butler) *var. tuberculata* Frang., 1930

MICRATHENA PERUANA (Tacz.), 1879; Frang., 1931

MICRATHENA REDUVIANA (Walck.), 1837; Frang., 1930

*MICRATHENA SEXACANTHA Frang., 1930

Family CTENIDAE

Sub-family CTENINAE

*CELAETICHEUS FULVORUFUS Frang., 1930

*CELAETICHEUS FULVORUFUS *var. afoliatus* Frang., 1931

*CTENUS ANCLATUS Frang., 1931

*CTENUS CRUCIATUS Frang., 1930

CTENUS DUBIUS Walck., 1805; Frang., 1926

CTENUS ENSIGER F. O. P. Cambr., 1900; Frang., 1926

CTENUS EXCAVATUS F. O. P. Cambr., 1900; Frang., 1930

*CTENUS GIGAS Frang., 1931

CTENUS HIBERNALIS Hentz, 1844; Banks, 1909

*CTENUS IMPRESSUS Frang., 1930

*CTENUS MACULATUS Frang., 1931

CTENUS RUFIBARBIS (Perty), 1833; Frang., 1930

*CTENUS VARIABILIS Frang., 1931

*CUPIENNIUS ARBOREUS Frang., 1934

*CUPIENNIUS PILOSUS (Frang.) = CTENUS, 1930

Family GNAPHOSIDAE

*CALLILEPIS GRISEA Banks, 1914

Family SPARASSIDAE

Sub-family SPARIANTHIDINAE

*DECAPHORA TRABIFORMIS Frang., 1931

*STASINA RANGELENSIS Frang., 1936

Sub-family MICROMMATINAE

**OLIOS BICOLOR* Banks, 1914

Sub-family HETEROPODINAE

HETEROPODA LONGIPES Koch; Frang., 1934

Family SELENOPIDAE

**SELENOPS AEQUALIS* Frang., 1934

Family THOMISIDAE

Sub-family STEPHANOPSINAE

ERISSUS VALIDUS Simon; Frang., 1934

Sub-family PHILODROMINAE

**TIBELLUS INSULARIS* Gertsch, 1933

Sub-family MISUMENINAE

**MISUMENA PICTA* Frang., 1926

**MISUMENA QUADRIVULVATA* Frang., 1926

THOMISUS ONUSTUS Walck.; Frang., 1926

Family CLUBIONIDAE

Sub-family CLUBONINAE

CLUBIONA PALLIDULA (Clerck), 1757; Frang., 1931

**CLUBIONA TENERA* Frang., 1934

**CLUBIONA TENUIS* Frang., 1934

MATIDIA ATTENUATA (O. P. Cambr.), 1893; Frang., 1930

MACERIO FLAVUS (Nicolet), 1849; Frang., 1930

STROTARCHUS NEBULOSUS Simon, 1888; Frang., 1930

**STROTARCHUS STRIATUS* Frang., 1934

Sub-family ANYPHAENINAE

ANYPHAENA ACCENTUATA (Walckenaer), 1802; Frang., 1930

**ANYPHAENA PALLIDULA* Frang., 1930

**AYSHA FUSCA* Frang., 1926

AYSHA MINUTA F. O. P. Cambr., 1900; Frang., 1926

AYSHA SEPTENA Frang., 1934

AYSHA VALVULA F. O. P. Cambr.; Frang., 1926

GAYENNA AMERICANA Nicolet, 1849; Frang., 1926

WULFILA PALLIDA O. P. Cambr., 1895; Frang., 1926

*WULFILA PRETIOSA Banks, 1914

*WULFILA SANGUINEA Frang., 1931

*WULFILA TAURICORNEA Frang., 1934

WULFINA TENUISSIMA Simon, 1896; Frang., 1930

*WULFILA TINCTA Frang., 1930

Sub-family LIOCRANINAE

*SYRISCA AGELENOIDES Frang., 1926

*SYRISCA INSULARIS (Lucas), 1857; Frang., 1926

Sub-family CORINNINAE

*CORINNA ABERRANS Frang., 1926

*STETHORRIAGUS MANDIBULATUS Frang., 1930

*STETHORRIAGUS STRIATUS Frang., 1926

TRACHELAS RUBER Keys., 1887; Frang. 1930 = TRACHELAS
TRANQUILLUS (Hentz), 1847

Family SALTICIDAE

Sub-family LYSSOMANINAE

LYSSOMANES NIGROPICTUS Peckham, 1888; Frang., 1930

LYSSOMANES PORTORICENSIS Petr., 1930; Frang., 1934

LYSSOMANES VIRIDIS (Walek.), 1837; Frang., 1936

Sub-family MYRMARACHNINAE

*SARINDA GLABRA Frang., 1930

SIMONELLA MYRMECIAEFORMIS (Tacz.), 1871; Frang., 1930

Sub-family SPILARGINAE

*EMATHIS UNISPINA Frang., 1930

Sub-family HASARIINAE

*HASARIUS BISETATUS Frang., 1930

*TARIONA MACULATA Frang., 1930

Sub-family MAEVIINAE

FUENTES PERTINAX Peck., 1894, Frang., 1930

Sub-family CYTAEINAE

PSELCIS LATEFASCIATA Simon, 1903; Frang., 1930

*NAGAINA OLIVACEA Frang., 1930

Sub-family PLEXIPPINAE

*CORYTHALIA ARCUATA Frang. *var. fulgida* Frang., 1930

Sub-family HELIOPHANINAE

*PELEGRINA GENICULATA Frang., 1930

Sub-family DENDRYPHANTINAE

*DENDRYPHANTES VARIEGATUS *var. limbatus* Frang., 1930

PHIDIPPUS RUBER Keys., 1884; Frang., 1926=P. MCCOOKI Peck.

HENTZIA PECKHAM (Cockerell), 1893; Frang., 1934

Sub-family MARPISSINAE

CERIONESTA LUTEOLA (Peck.), 1893; Frang., 1934

*MENEMERUS DEPRESSUS Frang., 1930

*MENEMERUS OCHRACEUS Frang., 1930

*MENEMERUS PROXIMUS Frang., 1934

Sub-family PLEXIPPINAE

*PARAPLEXIPPUS QUADRISIGNATUS Frang., 1930

*PARAPLEXIPPUS SEXSIGNATUS Frang., 1930

BIBLIOGRAPHY

BALBOA, PELEGRIN FRANGANILLO. *See Franganillo*

BANKS, NATHAN

- 1892. The Spider Fauna of the Upper Cayuga Lake Basin. *Proc. Acad. Nat. Sci. Phila.*, pp. 11-81, pls. 1-5.
- 1895. Some New Attidae. *Canad. Entomol.*, **27**, pp. 96-102.
- 1896. New North American Spiders and Mites. *Trans. Amer. Entomol. Soc.*, **23**, pp. 57-77.
- 1898a. Some New Spiders. *Canad. Entomol.*, **30**, pp. 185-188.
- 1898b. Arachnida from Baja California and other parts of Mexico. *Proc. Calif. Acad. Sci.*, 3rd ser., **1**, pp. 205-308, pls. 13-17.
- 1902. Some Spiders and Mites from the Bermuda Islands. *Trans. Conn. Acad. Sci.*, **11**, pp. 267-275.
- 1903. A List of Arachnida from Hayti, with Descriptions of New Species. *Proc. Acad. Nat. Sci. Phila.*, **55**, pp. 340-345, pl. 15.
- 1904. The Arachnida of Florida. *Proc. Acad. Nat. Sci. Phila.*, **56**, pp. 120-147, pls. 7-8.
- 1905. Families and Genera of Araneidea. *Synopses of North American Invertebrates*, no. XX. *Amer. Nat.*, **39**, pp. 293-323.
- 1908. New Species of Theridiidae. *Canad. Entomol.*, **40**, pp. 205-208.
- 1909. Arachnida of Cuba. *Sec. Rept. Centr. Exper. Stat. of Cuba*, pp. 150-174, pl. 45.
- 1914. New West Indian Spiders. *Bull. Amer. Mus. Nat. Hist.*, **33**, pp. 639-642, pl. 43.
- 1929. Spiders from Panama. *Bull. Mus. Comp. Zoöl., Harvard*, **69**, no. 3, pp. 53-96, pls. 1-4.
- 1932. An Annotated List of Oklahoma Spiders. *Univ. Oklahoma Biol. Surv.*, **4**, pp. 12-34, 7 figs.

BANKS, N. AND BARBER, H. G.

- 1926. Appendix in "The Phenomenon of Myrmecoidy," (etc.), by Myers and Salt. *Trans. Entomol. Soc. London*, **74**, pp. 427-436, pl. 93.

BARROWS, W. M.

- 1919. The taxonomic position of *Mysmena bulbifera* (*Glenognatha bulbifera*) Banks, with some observations on its habits. *Ohio Nat., Columbus*, **19**, pp. 210-212.

BECKER, LÉON

- 1879. Diagnoses de nouvelles Aranéides Américaines. *Ann. Soc. Entomol. Belgique*, **22**, pp. 77-86, pls. 1-2.

BISHOP, SHERMAN C.

- 1924. A Revision of the Pisauridae of the United States. *Bull. N. Y. State Mus., Albany*, no. 252, pp. 1-63, pls. 1-37.

BISHOP, SHERMAN C. AND CROSBY, C. R.

1930. Studies in American Spiders; Genera *Ceratinopsis*, *Ceratinopsodis* and *Tutaibo*. Journ. N. Y. Entomol. Soc., **38**, pp. 15-33, pls. 3-6.

BLAUVELT, HELEN H.

1937. The Comparative Morphology of the Secondary Sexual Organs of *Linyphia* and Some Related Genera, including a Revision of the Group. Festschr. von Prof. Dr. Strand, **2**, pp. 81-171, pls. 6-23.

BRYANT, ELIZABETH B.

1931. Notes on North American Anyphaeninae in the Museum of Comparative Zoölogy. Psyche, Boston, **38**, pp. 102-123, pls. 6-8.
 1933. New and Little Known Spiders from the United States. Bull. Mus. Comp. Zoöl., Harvard, **74**, no. 6, pp. 171-193, pls. 1-4.
 1936. Descriptions of some New Species of Cuban Spiders. Mem. Soc. Cubana Hist. Nat., **10**, pp. 325-332, pl. 23.

BUTLER, A. G.

1873. A List of Spiders of the Genus *Acrosoma*, with Descriptions of New Species. Proc. Zoöl. Soc. London, pp. 420-429.

CAMBRIDGE, F. O. P.

- 1897-1905. Arachnida: Araneidea and Opiliones, **2**, pp. XII+610, 54 pls. In *Biologia Centrali-Americana*.

CAMBRIDGE, O. P.

1873. On some new Genera and Species of Araneidea. Proc. Zoöl. Soc. London, pp. 112-129, pls. 12-14.
 1880. On some new and little known Spiders in the Genus *Argyrodes*. Proc. Zoöl. Soc. London, pp. 320-342, pls. 28-30.
 1882. On new Genera and Species of Araneidea. Proc. Zoöl. Soc. London, pp. 423-442, pls. 29-31.
 1889-1902. Arachnida: Araneidea, **1**, pp. XV+317, 39 pls. In *Biologia Centrali-Americana*.

CHAMBERLIN, R. V.

1908. Revision of North American Spiders of the Family Lycosidae. Proc. Acad. Nat. Sci. Phila., pp. 158-318, pls. 8-23.
 1916. Results of the Yale Peruvian Expedition of 1911. The Arachnida. Bull. Mus. Comp. Zoöl., Harvard, **60**, no. 6, pp. 173-299, pls. 1-25.
 1917. New Spiders of the Family Aviculariidae. Bull. Mus. Comp. Zoöl., Harvard, **61**, no. 3, pp. 21-75, pls. 1-5.
 1923. North American Species of *Mimetus*. Journ. Entomol. Zoöl., Claremont, Calif., **15**, pp. 3-7.
 1924a. Descriptions of New American and Chinese Spiders, with notes on other Chinese species. Proc. U. S. Nat. Mus., **63**, pp. 1-38.
 1924b. The Spider *Fanna* of the Shores and Islands of the Gulf of California. Proc. Calif. Acad. Sci., 4th. ser., **12**, pp. 561-694, figs. 1-100.

1925. New North American Spiders. Proc. Calif. Acad. Sci., 4th ser., **14**, pp. 105-142, figs.
- CHAMBERLIN, R. V. AND IVIE, WILTON
1934. A New Genus of Theridiid Spiders, in which the Male develops only one Palpus. Bull. Univ. Utah, **24**, Biol. Ser., **2**, no. 4, pp. 1-11, pls. 1-3.
- CROSBY, C. R.
1934. An Interesting Two-eyed Spider from Brazil (Tetrablemmidae). Bull. Brooklyn Entomol. Soc., **29**, pp. 19-23.
- CROSBY, C. R. AND BISHOP, S. C.
1928. Revision of the Spider Genera *Erigone*, etc. Bull. N. Y. State Mus. Albany, no. **27**, pp. 3-98.
1930. Studies in American Spiders. Journ. N. Y. Entomol. Soc., **38**, pp. 15-33, pls. 3-6.
1931. Studies in American Spiders. *Ibid.*, **39**, pp. 359-403, pls.
- DALMAS, COMTE DE
1916. Revision du Genre *Orchestina* E. Simon. Ann. Soc. Entomol. France, **85**, pp. 203-258, 36 figs.
- DUFOUR, LÉON
1820. Descriptions de cinq Arachnides nouvelles. Ann. Général Sci. Phys., **4**, pp. 198-208, pl. 77.
- EMERTON, J. H.
1882. New England Spiders of the Family Theridiidae. Trans. Conn. Acad. Sci., **6**, pp. 1-86, pls. 1-24.
1884. New England Spiders of the Family Epeiridae. *Ibid.*, **6**, pp. 295-342, pls. 33-40.
1885. New England Spiders of the Family Lycosidae. *Ibid.*, **6**, pp. 481-505, pls. 46-49.
1891. New England Spiders of the Family Attidae. *Ibid.*, **8**, pp. 220-252, pls. 16-21.
1909. Supplement to the New England Spiders. *Ibid.*, **14**, pp. 171-236, pls. 1-12.
- FABRICIUS, J. C.
1775. Systema Entomologiae, etc. 1 volume. Aranea, pp. 431-439.
- 1792-1794. Entomologia Systematica, etc. 4 volumes. Aranea, **2**, pp. 407-428.
- FAGE, LOUIS
1929. Araignées des grottes de l'Amérique du Nord et de Cuba. Boll. Lab. Zoöl. gen. agraria Reg. Instit. sup. agr. Portici, **22**, pp. 181-187, 2 figs.

FRANGANILLO, PELEGRIN BALBOA, S.J.

1926. Aracnidos nuevos o poco conocidos de la Isla de Cuba. Bol. Soc. Entomol. Espana, **9**, pp. 42-68, 5 figs.
1930. Mas Aracnidos Nuevos de la Isla de Cuba. Mem. Inst. Nac. de Investigac. Cientif. Habana, **1**, pp. 47-99, 21 figs. (A reprint or reissue by the author is separately paged, beginning with page 1, and this is the paper usually cited in the text.)
- 1931-1935. Estudios de Belen, [1931], no. 27, pp. 168-171 and pp. 285-288; no. 28, pp. 44-49; [1935], no. 29, pp. 20-26; no. 29, pp. 27-23; [1935], no no. (N.B. Frequently no date, no number of issue, & no paging).
1934. Aracnidos Cubanos estudiados desde 1930 hasta 1934. Mem. Soc. Cubana Hist. Nat., **8**, pp. 145-168, 4 figs. (A reprint of his descriptions of new species in the Estudios de Belen.)
1935. Una nueva especie de araña peluda. Mem. Soc. Cubana Hist. Nat., **9**, pp. 259-262, pl. 23, figs.
1936. Los Aracnidos de Cuba hasta 1936. Privately printed in Havana; pp. 1-183, figs.
(Contains redescriptions of all his new species in his previous papers. In many cases, however, they are called spec. nov. over again).

FOX, IRVING

1937. The Nearctic spiders of the family Heteropodidae. Journ. Wash. Acad. Sci., **27**, pp. 461-474.

GERTSCH, W. J.

1934. Notes on American Lycosidae. Amer. Mus. Novitates, no. 693, 25 pp.

HENTZ, N. M.

1842. Descriptions and Figures of the Araneids of the United States. Journ. Boston Soc. Nat. Hist., **4**, pp. 54-57, pl. 7; *ibid.*, pp. 223-231, pl. 8.
1844. (continuation). **4**, pp. 386-396, pls. 17-19.
1845. (continuation). **5**, pp. 189-202, pls. 16-17.
1846. (continuation). **5**, pp. 352-369, pls. 21-22.
1847. (continuation). **5**, pp. 444-478, pls. 23-24, and 30-31.
1850. (continuation). **6**, pp. 18-35, pls. 3-4; *ibid.*, pp. 271-295, pls. 9-10.
1875. The Spiders of the United States. Occ. Papers Boston Soc. Nat. Hist., **2**, pp. XIII+171, pls. 1-21.

KEYSERLING, GRAF EUGEN VON.

1863. Beschreibungen neuerer und wenig bekannter Arten aus der Familie Orbitelae, etc. Sitz-Bericht. Isis, Dresden, pp. 63-154, pls. 1-7.
1865. Beiträge zur Kenntnis der Orbitelae. Verhandl. K. K. Zoöl. Bot. Gesell. Wien, **15**, pp. 799-856, pls. 18-21.

1876. Über amerikanische Spinnenarten der Unterordnung Citigradae. *Ibid.* **26**, pp. 609-708, pls. 7,8.
1881. Neue Spinnen aus Amerika. *Ibid.* **31**, pp. 269-314, pl. 11.
1884. Neue Spinnen aus Amerika. *Ibid.* **34**, pp. 489-534, pl. 13.
1887. Neue Spinnen aus Amerika. *Ibid.* **37**, pp. 421-490, pl. 6.
1880-1886. Die Spinnen Amerikas. In 4 volumes, published at Nürnberg. Vol. 1, 1880, Laterigradae, pp. 1-283, pls. 1-8. Vol. 2, Theridiidae, in 2 parts, 1884+1886, pp. 1-222, pls. 1-10, and pp. 1-295, pls. 11-21.

KOCH, C.

- 1836-1848. Die Arachniden, etc. vols. 3-16.

LUCAS, H.

1833. Description d'une espèce nouvelle d'Arachnide appartenant au genre Argyope de M. Savigny. Ann. Soc. Entomol. France, **2**, pp. 86-88, pl. 1.
1838. Arachnida. In Barker-Webb et Berthelot, "Hist. Nat. des Îles Canaries," **2**.
1845. Note sur une nouvelle espèce d'Aranéide appartenant au genre Scytodes. Ann. Soc. Entomol. France, 2nd. ser., **3**, p. 73, pl. 1.
1857. Arachnides. In Ramon de Sagra, Hist. phys. polit. nat. de l'île de Cuba.

LUTZ, FRANK E.

1914. Collecting in Cuba. Journ. Amer. Mus. Nat. Hist., **14**, pp. 99-106.
1915. List of Greater Antillean Spiders, with notes on their Distribution. Ann. N. Y. Acad. Sci., **26**, pp. 71-148.

MACLEAY, W. S.

1839. On some new Forms of Arachnida. Ann. Mag. Nat. Hist., 1st. ser., **2**, pp. 1-14, 2 pls.

MARX, GEORGE.

1883. Araneina. In L. O. Howard, List, Invertebrate Fauna of South Carolina, chapter XI.
1889. A Contribution to the Knowledge of the Spider Fauna of the Bermuda Islands. Proc. Acad. Nat. Sci. Phila., pp. 98-101, pl. 4.

MCCOOK, HENRY C.

1878. The Basilica spider and her snare. Proc. Acad. Nat. Sci. Phila. pp. 124-133, figs. 1-4.
1888. Descriptive notes of new American Species of Orb-weaving Spiders. *Ibid.*, pp. 193-199.
1889-1893. American Spiders and their Spinning Work. In 3 volumes, published by the author, Philadelphia, Vol. 1, 1889, Vol. 2, 1890, Vol. 3, 1893.

MELLO-LEITÃO.

1929. *Aphantochilidas e Thomisidas do Brazil*. Archiv. Mus. Nac. Rio de Janeiro, **31**, pp. 1-359; numerous plates (unnumbered), many colored.

PECKHAM, G. W. and E. G.

1883. Descriptions of New or Little Known Spiders of the Family Attidæ, from various parts of the United States. Privately printed, Milwaukee, Wisc. 35 pages, 3 pls.
1889. North American Spiders of the Family Attidae. Trans. Wisc. Acad. Sci., **7**, pp. 1-104, pls. 1-6.
1892. Ant-like Spiders of the Family Attidae. Occ. Pap. Nat. Hist. Soc. Wisc., **2**, pp. 1-83, pls. 1-7.
1893. On the Spiders of the Family Attidae of the Island of St. Vincent. Proc. Zoöl. Soc. London, pp. 692-704, pls. 61-62.
1894. Spiders of the Marptusa Group of the Family Attidae. Occ. Pap. Nat. Hist. Soc. Wisc., **2**, pp. 85-156, pls. 8-14.
- 1901a. On the Spiders of the Family Attidae found in Jamaica. Proc. Zoöl. Soc. London, pp. 6-16, pls. 2-4.
- 1901b. Spiders of the Phidippus group of the Family Attidae. Trans. Wisc. Acad. Sci., **13**, pp. 282-358, pls. 23-28.
1909. Revision of the Attidae of North America. *Ibid.*, **16**, pp. 355-646, pls. 29-51.

PECKHAM, G. W., E. G. and WHEELER, W. M.

1889. Spiders of the subfamily Lyssomanae. Trans. Wisc. Acad. Sci., **7**, pp. 211-256, pls. 11, 12.

PETRUNKEVITCH, ALEXANDER

1911. A Synonymic Index-Catalogue of Spiders of North, Central, and South America, etc. Bull. Amer. Mus. Nat. Hist., New York, **29**, pp. 1-791.
1914. Attidae of the Yale Dominica Expedition. Journ. N. Y. Entomol. Soc., **22**, pp. 329-331, pl. 12.
- 1925a. New Erigoninae from Tennessee. *Ibid.*, **33**, pp. 170-176, pl. 8.
- 1925b. Arachnida from Panama. Trans. Conn. Acad. Arts. Sci., **27**, pp. 51-248, 157 figs.
1926. Spiders from the Virgin Islands. *Ibid.*, **28**, pp. 21-78, 28 figs.
1928. Systema Aranearum. *Ibid.*, **29**, pp. 1-270.
- 1929-1930. The Spiders from Porto Rico. *Ibid.*, pt. 1, **30**, pp. 1-158, 150 figs.; pt. 2, do. pp. 159-355, 240 figs.; pt. 3, 1930, **31**, pp. 1-191, 168 figs.

ROIG, SANCHEZ

1911. Los Arañidos de la Isla de Cuba. Revista Facult. Letras Ciencias Univ. Habana, **12**, pp. 349-363.

SEELEY, RALPH M.

1928. Revision of the Spider Genus *Tetragnatha*. Bull. N. Y. State Mus., Albany, no. 278, pp. 99-150, pls. 1-4.

SCHWARZ, E. A.

1904. Note on a gigantic net of the social spider, *Uloborus republicanus* Simon, from Cuba. Proc. Entomol. Soc. Wash., 6, no. 3, pp. 147-148.

SIMON, EUGÈNE

1891. Araignées sociables. Ann. Soc. Entomol. France, 60, pp. 5-14, pls. 1-4.
- 1891-1897. On the Spiders of the Island of St. Vincent. Part 1, Proc. Zoöl. Soc. London, pp. 549-575, pl. 42; part 2, 1894, *ibid.*, pp. 519-526, figs.; part 3, 1897, *ibid.*, pp. 860-890, figs.
- 1892-1903. Histoire Naturelle des Araignées. 2nd. edition. Paris. 2 volumes. Vol. 1, 1892, pp. I-VII, 1-1084, 1098 figs. Vol. 2, fasc. 1, 1897, pp. 1-192, figs. 1-200; fasc. 2, pp. 193-380, figs. 201-384; fasc. 3, 1901, pp. 381-668, figs. 385-792; fasc. 4, 1903, pp. 669-1080, figs. 793-1122.
1896. Descriptions d'espèces nouvelles de l'ordre des Araneae. Ann. Soc. Entomol. France, 65, pp. 465-510, pls. 12, 13.

TACZANOWSKI, LADISLAU.

1873. Les Aranéides de la Guyane française. Horae Soc. Entomol. Ross., 10, pp. 56-115, pl. 2.

THORELL, TORD T. T.

1859. Nya exotiska Epeirider. Ofvers K. Vet.-Akad. Förh., pp. 299-304.

WALCKENAER, C. A., BARON DE.

1802. Faune Parisienne, 2 volumes, Paris. Aranea, in vol. 2, pp. 187-250.
1805. Tableau des Aranéides, Paris, XII + 88 pages, 9 pls.
- 1837-1847. Histoire Naturelle des Insectes Aptères. 4 volumes. Paris. Atlas with 52 plates.

INDEX OF GENERA AND SPECIES¹

abnormis, Corinna	441	aproducta, Cyrtognatha	357
Acartauchenius	327	arabesca, Epeira	341
Achaea	310	arabesca, Neoscona	341
<i>Acrosoma</i>	371	Aranea	334
affinis, Azilia	349	Arctosa	283
agilis, Pellenes	493	arcuata, Corythalia	482
Agobardus	465	arenata, Epeira	345
Agriognatha	355	arenata, Verrucosa	345
aissus, Selenops	408	argentata, Aranea	333
albicans, Clubiona	420	argentata, Argiope	333
albicans, Corinna	420	argentata, Conopistha	307
albomaculata, Chrysso	311	argenteo-lunulatum, Theridio-	
albomaculata, Steatoda	311	soma	367
albonigra, Larinia	339	<i>argentiola</i> , <i>Argyrodes</i>	306
albonigra, Metazygia	339	Argiope	333
albopilosa, Dictyna	300	argyra, Leucauge	359
albopilosa, Pardosa	284	argyra, Tetragnatha	359
Alcimosphenus	357	Argyrodes	306
Allepeira	358	Argyropeira	360
americana, Argyrodes	306	Ariadna	264
americana, Conopistha	306	Ariamnes	309
americana, Ero	306	<i>armata</i> , <i>Aranea</i>	376
<i>americana</i> , <i>Misumen</i> a	415	<i>armata</i> , <i>Micrathena</i>	376
americana, Peekhamia	456	Artema	289
americana, Synageles	456	arthuri, Ariadna	264
americanus, Ulesanis	302	Asagena	302
americanus, Uloborus	327	atkinsi, Theridion	317
amoena, Castianeira	447	atlanta, Artema	289
anastera, Epeira	338	atlantica, Lycosa	279
anastera, Eustala	333	Attus	358
Anelosimus	311	audax, Attus	502
anglicana, Ceratinopsis	325	audax, Hentzia	496
anglicanum, Theridion	325	audax, Phidippus	502
<i>Anoka</i>	493	<i>aurae</i> , <i>Argyrodes</i>	306
anormalis, Agobardus	465	aurantia, Argiope	333
antillana, Hentzia	494	aurata, Corythalia	484
antillana, Tetragnatha	364	aurata, Stoidis	484
antillanum, Chorizomma	273	auratus, Attus	484
antillanus, Lyssomanes	448	aurostriata, Leucauge	361
antillanus, Nesticus	320	autumnalis, Erigone	326
Anyphaena	427	autumnalis, Pachygnatha	363
Anyphaenella	432	Aysha	433
Apochinomma	446	Azilia	348

¹All species formally recognized from Cuba are indexed in bold face type; absolute synonyms are in italics.

<i>badia</i> , Tarentula	278	<i>Caridrassus</i>	392
<i>bajula</i> , Scytodes	288	<i>carlota</i> , Clubiona	421
<i>balaustina</i> , Epeira	338	<i>caroli</i> , Cyclosa	336
<i>balaustina</i> , Eriophora	338	<i>caroli</i> , Epeira	336
<i>Balmaceda</i>	464	<i>Castianeira</i>	446
<i>basilica</i> , Allepeira	358	<i>cataphractum</i> , Hexablemma	270
<i>basilica</i> , Epeira	358	<i>caudata</i> , Conopistha	306
<i>basilica</i> , Hentzia	358	<i>caudata</i> , Ero	306
<i>bellula</i> , Misumena	413	<i>caudata</i> , <i>Eustala</i>	338
<i>bellulus</i> , Misumenops	413	<i>caudata</i> , Tetragnatha	365
<i>benneri</i> , Oecobius	273	<i>caudatus</i> , Argyrodes	306
<i>bicolor</i> , Ariadna	264	<i>caudus</i> , Phormictopus	263
<i>bicolor</i> , <i>Herpyllus</i>	389	<i>cavaticus</i> , Scotolathys	300
<i>bicolor</i> , Trachela	443	<i>Celaetycheus</i>	377
<i>bispinosa</i> , Anyphaena	427	<i>celer</i> , Hypoplatea	404
<i>bivittata</i> , Marpissa	505	<i>celer</i> , Misumenops	415
<i>bivittatus</i> , Salticus	505	<i>celer</i> , Selenops	404
<i>blanda</i> , Scytodes	287	<i>celer</i> , Thomisus	415
<i>blandum</i> , Coleosoma	303	<i>cellulana</i> , Aranea	322
<i>brasiliانا</i> , Stephanopoides	410	<i>cellulanus</i> , Nesticus	321
<i>brevis</i> , Cyclosa	335	<i>Ceraticelus</i>	323
<i>brevitarsus</i> , Ctenus	379	<i>Ceratinopsis</i>	325
<i>bruneri</i> , Chemmis	445	<i>Centromerus</i>	321
<i>Bucranium</i>	418	<i>championi</i> , Scytodes	288
<i>bulbifera</i> , <i>Glenognatha</i>	362	<i>Cheiracanthium</i>	418
<i>bulbifera</i> , <i>Mysmena</i>	362	<i>Chemmis</i>	445
<i>Bythocrotus</i>	491	<i>Chiracanthium</i>	387
<i>cabriolatum</i> , Theridion	318	<i>Chorizomma</i>	273
<i>cabriolatus</i> , Celaetycheus	377	<i>Chrysso</i>	311
<i>calcaratus</i> , Ctenus	382	<i>cidrelicola</i> , Theridion	349
<i>californicum</i> , Chorizomma	274	<i>ciliatus</i> , Miagrammopes	330
<i>Callilepis</i>	390	<i>cineta</i> , Eilica	390
<i>cambridgei</i> , Parawixia	342	<i>cineta</i> , Eilicina	390
<i>cambridgei</i> , <i>Prostheclina</i>	484	<i>cinerea</i> , Arctosa	283
<i>cambridgei</i> , Tetrablemma	269	<i>cinerea</i> , Lycosa	283
<i>canceriformis</i> , Aranea	369	<i>clarissa</i> , Syriscia	397
<i>canceriformis</i> , Gasteracantha	369	<i>clarissa</i> , Terminiis	397
<i>capitata</i> , <i>Filistata</i>	263	<i>clavipes</i> , Aranea	354
<i>capitatus</i> , Dendryphantes	502	<i>clavipes</i> , Nephila	354
<i>capitatus</i> , Metaphidippus	502	<i>clementina</i> , Meotipa	314
<i>Caponina</i>	272	<i>Clubiona</i>	420
<i>cardinalis</i> , Attus	503	<i>coccinea</i> , Frontina	323
<i>cardinalis</i> , Phidippus	503	<i>coccinea</i> , Frontinella	323
<i>Carepalxis</i>	344	<i>coccinea</i> , Linyphia	323
		<i>coccinea</i> , Linyphiella	323

cockerelli, Nilakantha	455	cubanus, Myrmecotypus	445
coekwelli, Nilakantha	455	cubensis, Agobardus	468
coeruleolineatus, Modisimus	291	cubensis, Emathis	468
cognatus, Parastephanops	413	cubensis, Phormictopus	262
Coleosoma	303	Cupiennius	384
Commoris	465	Cyclosa	335
<i>communis</i> , Uloborus	328	<i>cylindracca</i> , Micrathena	372
concolor, Modisimus	289	cylindricus, Conopistha	307
concolor, Zygoballus	480	Cyrtognatha	357
conica, Cyclosa	336	Cyrtopholis	261
<i>conicus</i> , Leptopholcus	296		
connexa, Thaumasia	277	darlingtoni, Anyphaena	429
Conopistha	306	darlingtoni, Opopaea	267
<i>cophinaria</i> , Miranda	333	darlingtoni, Stemmops	316
Corinna	441	dalei, Micromerys	296
coronatus, Attus	491	debile, Cheiracanthium	418
coronatus, Pellenes	491	Decaphora	399
Corythalia	482	defunctum, Theridion	317
coxana, Systemita	294	deinognathus, Lyssomanes	449
coxanus, Ctenus	381	Deinopsis	331
crassicauda, Edricus	337	<i>delicatulus</i> , Leptopholcus	296
crassicauda, Epeira	337	Demotarbus	261
erinophora, Clubiona	422	Dendryphantes	501
erocata, Clubiona	421	dentigera, Tetragnatha	365
<i>crumbi</i> , Diplocephalus	362	deserticola, Opopaea	267
Ctenus	379	Diblemma	270
cubae, Cupiennius	386	Dictyna	298
cubana, Aerosoma	371	dilatata, Lycosa	283
cubana, Castianeira	446	Diplocephalus	362
cubana, Dictyna	298	Diplura	260
cubana, Diploena	304	Dipoena	304
cubana, Micrathena	371	directa, Drexelia	337
<i>cubana</i> , Mygale	261	directa, Epeira	337
cubana, Oxsoma	435	distincta, Pseudometa	352
cubana, Pardosa	285	diversa, Anyphaena	430
cubana, Pseudosparianthis	398	diversa, Thwaitesia?	311
cubana, Siloca	456	Dolomedes	278
cubana, Singa	344	donisthorpii, Diblemma	270
cubana, Stothis	260	Drexelia	337
cubana, Tentabunda	398	dubius, Thanatidius	276
<i>cubana</i> , Xencsthis	261		
<i>cubanum</i> , Oxyopeidon	286	Echenus	392
cubanum, Paranyrmecion	395	echinatus, Misumessus	412
<i>cubanus</i> , Demotarbus	261	echinatus, Parastephanops	412
cubanus, Miagrammopes	329	edax, Eriophora	338

Edricus	337	floridana, Dictyna	299
Eliea	390	floridana, Gamasomorpha	268
Eilicina	390	<i>floridanus, Icius</i>	500
Elaver	424	floridense, Theridion	319
elaver, Clubiona	423	foliatus, Cupiennius	386
electum, Theridion	318	forcipata, Micrathena	372
elegans, Eilicina	391	forcipatum, Acrosoma	372
elevatus, Modisimus	291	fordum, Theridion	319
elongata, Conopistha	306	fordum, Tidarren	319
<i>elongata, Cyclosa</i>	336	formica, Synemosyna	450
elongata, Tetragnatha	365	formosus, Pardessus	490
elongatus, Modisimus	291	formosus, Selenops	405
elongatus, Pholcus	294	foxi, Mimognatha	362
elongatus, Smeringopus	294	foxi, Theridion	362
Emathis	465	Frontina	323
emertoni, Corythalia	485	Frontinella	323
emertoni, Grammonota	326	fusca, Lycosa	280
enoplognatha, Commoris	466	fusca, Scytodes	288
Epeira	334	fusca, Tarentula	280
Epiblemum	498	fuscovittata, Epeira	338
Episinus	313	fuscovittata, Eustala	338
Erigone	326	Gamasomorpha	268
Eriophora	338	Gasteracantha	369
Ero	306	Gea	334
Eucta	363	geniculata, Aranea	327
<i>Eugnatha</i>	363	geniculatus, Uloborus	327
Eurypelma	261	geometricus, Latrodectus	305
Eustala	338	gibbosus, Cyrtopholis	261
Eutichurus	387	gibbosus, Sphaerobothria	261
excepta, Clubiona	422	glaucus, Modisimus	290
extensa, Tetragnatha	363	Glenognatha	358
<i>facetus, Pellenes</i>	492	<i>globosa, Epeira</i>	335
fasciculatus, Menemerus	461	globosus, Pholcus	293
faxoni, Aranea	334	globosus, Physocylus	293
ferum, Cheiracanthium	418	globosum, Theridion	319
Filistata	263	gloriae, Diplocephalus	363
Filistatoides	263	Gnaphosa	389
fimbriatus, Agobardus	470	gracilis, Anyphaena	433
flagellum, Ariamnes	309	gracilis, Aysha	433
flavidus, Spintharus	309	gracilis, Clubiona	433
flavipedes, Dictyna	299	gracilis, Micrathena	375
flavipes, Colcosoma	304	gracilipes, Corinna	441
flavomaculata, Micrathena	374	gracilipes, Hypsinotus	441
floridana, Colcosoma	303	<i>grallator, Tetragnatha</i>	365

Grammonota	326	inconspicua, Sidusa	460
granulata, Onocolus	409	inconspicuus, Litopyllus	393
gratiosus, Episinus	313	inerma, Thiodina	451
gregalis, Epeira	341	inornatus, Modisimus	292
grisea, Hamataliwa	286	insanus, Acartauchenius	327
guanabacoae, Nops	271	insanus, Grammonota	327
gundlachi, Epeira	335	insignis, Achaea	310
		insignis, Filistata	263
habanensis, Tama	274	insignis, Filistatoides	263
Habrocestum	463	insulana, Anyphaena	430
Hamataliwa	286	insulana, Paratheuma	387
hambletoni, Matta	270	insulanus, Eutichurus	387
hebraica, Scytodes	288	insularis, Callilepis	392
Hedypsilus	296	insularis, Lycosa	278
helluo, Lycosa	279	insularis, Selenops	405
Hentzia	493	insularis, Teminius	398
heptagon, Epeira	334	intersector, Mimetus	377
heptagon, Gea	334	<i>interruptum</i> , <i>Theridion</i>	303
Herpyllus	389	inutilis, Saitis(?)	463
hesperus, Mimetus	377	Isaloides	408
Heteroonops	265	Ischnaspis	266
Heteropoda	403	Ischnocolus	260
Hexablemma	270	Ischnothele	260
hibernalis, Filistata	263	Ischnothyreus	266
hirsuta, Syrisca	389	isolata, Lycosa	282
hirsutus, Ischnocolus	260	isolata, Paratheuma	388
hoffmanni, Sphaerobothria	262	isolatus, Ctenus	382
<i>hortorum</i> , <i>Epeira</i>	361	juana, Clubiona	424
<i>hortorum</i> , <i>Leucauge</i>	359	jucunda, Conopistha	307
horrida, Micrathena	374		
humilis, Corinna	441	keyserlingi, Agobardus	471
humilis, Hypsinotus	441	keyserlingi, Syrisca	397
<i>humilis</i> , <i>Linyphia</i>	323		
Hytia	505	labyrinthia, Epeira	341
Hypoplatea	409	labyrinthia, Metepeira	341
Hypsinotus	441	lamia, Deinopis	331
Hytanis?	265	lanceolatus, Trachelas	444
		Larinia	339
Icius	500	Lasiadora	260
immaculata, Wulfila	437	latens, Miagrommopes	330
incerta, Aranea	341	Latrodectus	305
incerta, Systemita	295	laticeps, Nysticus	415
incerta, Wixia	346	Leptopholeus	296
inclusa, Clubiona	420	Leucauge	359
inclusum, Cheiracanthium	420	licinus, Alcimosphenus	357

linguiformis, Meta	353	medioculatum, Tetrablemma . .	269
linguiformis, Pseudometa	353	Megamyrmeleon	395
Linyphia	323	<i>melanognathus</i> , <i>Marpissa</i>	505
Linyphiella	323	<i>melanognathus</i> , <i>Salcticus</i>	505
Liocranum	439	<i>Menalippe</i>	467
Lithyphantes	304	Menemerus	461
Litopyllus	393	Meotipa	314
littoralis, Arctosa	283	Meta	349
littoralis, Lycosa	283	Metacyrba	463
longicauda, Ischnothele	260	Metaphidippus	501
longicauda, Micrathena,	375	Metazygia	339
longipes, Anyphaenella	423	Metepeira	341
longipes, Seytodes	289	mexicana, Tama	274
Loxosceles	287	Miagrammopes	329
Lucarachne	349	Micrathena	369
lucasi, Stasina	400	Micromerys	296
luculenta, Achaea	310	militaris, Aranea	376
luctans, Xysticus	417	militaris, Attus	502
lutzi, Opopaea	267	militaris, Dendryphantes	502
Lycosa	278	militaris, Micrathena	376
lyra, Theridion?	319	militaris, Paraphidippus	502
Lyssomanes	448	milvina, Pardosa	284
		Mimetus	377
macleayi, Stasina	402	Mimognatha	362
macrura, Diplura	260	miniata, Aranea	335
<i>macrura</i> , <i>Ischnothele</i>	260	miniatus, Attus	503
mactans, Aranea	305	miniatus, Phidippus	503
mactans, Latrodectus	305	minina, Neoscona	341
maculata, Pardosa	285	minuta, Emathis	473
Mahadeva	345	minuta, Glenognatha	358
<i>Majella</i>	418	minuta, Poecilochroa	396
Majellula	417	minuta, Siloca	457
mammillata, Arosoma	374	minutissimus, Oonopinus	264
mammillata, Micrathena	374	Miranda	333
mandibulatus, Agobardus	474	Misumena	413
mandibulatus, Lyssomanes	449	Misumenops	413
Mangora	341	Misumessus	412
marginella, Dolomedes	278	mitrata, Hentzia	497
marginella, Thaumasia	278	mitrata, Wala	497
maritima, Clubiona	426	mitratus, Attus	497
Marpissa	505	Modisimus	289
marxi, Paidisca	302	moerens, Leucauge	360
Marxia	339	moerens, Opas	360
Matta	270	monae, Siloca	457
maxillaris, Oonopoides	266	montana, Azilia	348

<i>montana</i> , <i>Paratyle</i>	439	<i>oophorus</i> , <i>Lithyphantes</i>	303
<i>mundus</i> , <i>Agobardus</i>	476	<i>Opas</i>	360
<i>Mygale</i>	261	<i>Opopaca</i>	267
<i>Myrmecotypus</i>	445	<i>opulenta</i> , <i>Theridula</i>	320
<i>Mysmena</i>	362	<i>opulentum</i> , <i>Theridion</i>	320
<i>nautica</i> , <i>Neoscona</i>	342	<i>orizaba</i> , <i>Eugnatha</i>	366
<i>nechodoma</i> , <i>Theridiosoma</i>	368	<i>orizaba</i> , <i>Tetragnatha</i>	366
<i>nelli</i> , <i>Neon</i>	505	<i>Otiothops</i>	275
<i>nemoralis</i> , <i>Phrurolithus</i>	440	<i>ovatus</i> , <i>Modisimus</i>	292
<i>Neon</i>	504	<i>ovigerus</i> , <i>Centromerus</i>	321
<i>Neoscona</i>	341	<i>Oxyopeidon</i>	286
<i>Nephila</i>	354	<i>Oxyopes</i>	286
<i>nephilae</i> , <i>Argyrodes</i>	308	<i>Oxysoma</i>	435
<i>nephilae</i> , <i>Conopistha</i>	308	<i>Pachygnatha</i>	363
<i>Neriene</i>	325	<i>Paculla</i>	270
<i>nesiotes</i> , <i>Phormictopus</i>	263	<i>Paidisca</i>	301
<i>Nesticus</i>	320	<i>pallesceus</i> , <i>Onocolus</i>	411
<i>nigriceps</i> , <i>Neon</i>	504	<i>pallesceus</i> , <i>Tetragnatha</i>	366
<i>nigripes</i> , <i>Ceraticelus</i>	323	<i>pallida</i> , <i>Tetragnatha</i>	366
<i>nigripes</i> , <i>Singa</i>	345	<i>pallida</i> , <i>Aranea</i>	341
<i>nigriventris</i> , <i>Wixia</i>	346	<i>pallidus</i> , <i>Nesticus</i>	321
<i>nigrovittata</i> , <i>Agriognatha</i>	357	<i>palmarum</i> , <i>Attus</i>	358
<i>Nilakantha</i>	454	<i>palmarum</i> , <i>Epiblemum</i>	498
<i>Ninetella</i>	297	<i>palmarum</i> , <i>Hentzia</i>	498
<i>Ninetis</i>	298	<i>palmarum</i> , <i>Wala</i>	498
<i>Nops</i>	271	<i>panamensis</i> , <i>Gea</i>	333
<i>oaxacensis</i> , <i>Epeira</i>	342	<i>Paramyrmecon</i>	394
<i>oaxacensis</i> , <i>Neoscona</i>	342	<i>Paraphidippus</i>	502
<i>oblonga</i> , <i>Misumena</i>	415	<i>Parastephanops</i>	412
<i>oblonga</i> , <i>Misumenops</i>	415	<i>Paratheuma</i>	387
<i>obscurus</i> , <i>Cupiennius</i>	384	<i>Paratyle</i>	439
<i>obtusa</i> , <i>Conopistha</i>	308	<i>Parawixia</i>	342
<i>obtus</i> , <i>Argyrodes</i>	308	<i>Pardessus</i>	490
<i>octavus</i> , <i>Dendryphantes</i>	502	<i>Pardosa</i>	284
<i>oculata</i> , <i>Aranea</i>	337	<i>parietalis</i> , <i>Dictyna</i>	300
<i>oculata</i> , <i>Cyclosa</i>	337	<i>parvula</i> , <i>Corinna</i>	442
<i>Oecobius</i>	273	<i>parvula</i> , <i>Corythalia</i>	486
<i>okei</i> , <i>Tetrablemma</i>	270	<i>parvula</i> , <i>Epeira</i>	338
<i>olivaceus</i> , <i>Nops</i>	271	<i>parvula</i> , <i>Prostheclina</i>	486
<i>Onocolus</i>	409	<i>patellaris</i> , <i>Triacris</i>	268
<i>Oonopinus</i>	264	<i>pavidus</i> , <i>Modisimus</i>	293
<i>Oonopoides</i>	265	<i>paykulli</i> , <i>Attus</i>	491
<i>Oonops</i>	265	<i>paykulli</i> , <i>Plexippus</i>	491
		<i>Peckhamia</i>	456

peckhami, Balmaceda	464	purpurescens, Eriophora	338
peckhami, Corythalia	484	putus, Episinus	314
peckhami, Nilakantha	464	pygmaea, Prostheclina	484
pegnia, Aranea	335	pygmaea, Stoides	459
pegnia, Epeira	335	Pythonissa	389
pelegrina, Caponina	272		
pellax, Xysticus	417	quadrimaculata, Asagena	302
Pellenes	491		
Pelopatis	276	radiatus, Selenops	407
peltifer, Ischnaspis	266	Radulphius	387
peltifer, Ischnothyreus	266	rana, Oxyopeidon	286
pentagona, Onocolus	410	regius, <i>Phidippus</i>	502
perpusilla, Anyphaena	436	regnyi, Argyropeira	360
perpusilla, Temnida	436	regnyi, Leucauge	360
Peucetia	287	remotum, Liocranum	439
Phidippus	502	remota, Rhomphaea	308
Pholeus	293	republicanus, Uloborus	328
Phormiotopus	262	<i>reticulata</i> , <i>Mahadeva</i>	345
Phrurolithus	440	Rhomphaea	308
Phyllonethis	318	<i>riparia</i> , <i>Argiope</i>	333
Physocylus	293	<i>riparia</i> , <i>Lycosa</i>	283
pieta, Balmaceda	465	Rudra	465
pikei, Hyctia	505	rufescens, Loxoceles	287
pinarensis, Leucauge	359	rufescens, Scytodes	287
pinicola, Thaumasia	278	rufipes, Steatoda	319
Plexippus	491	rufipes, Theridion	319
<i>plumipes</i> , <i>Uloborus</i>	327	rugosa, Micrathena	375
Poecilochroa	396	rutenbergi, Thelechoris	260
portoricensis, Clubiona	425		
portoricensis, Pardosa	286	sagittata, Micrathena	372
producta, Cyrtognatha	357	Saitis	463
projiciens, Rhomphaea	309	sallei, Ctenus	386
prominens, Agobardus	478	sallei, Cupiennius	386
<i>prompta</i> , <i>Epeira</i>	338	Salticus	503
Prostheclina	484	salticus, Oxyopes	286
proximus, Dendryphantes	501	sargi, Caponina	272
proximus, Metaphidippus	501	saxatilis, Pardosa	285
<i>prudens</i> , <i>Dendryphantes</i>	501	Scoloderus	344
Pseudometa	352	Scotolathys	300
Pseudosparianthis	398	Scytodes	287
puerperus, Plexippus	455	Selenops	404
pulcherrima, Argyropeira	360	seneca, Tetragnatha	366
pulchra, Majellula	417	septenmaculatus, Lithyphantes	304
pulchra, Ninetella	297	Sergiolus	392
pulchra, Syrisca	397	sericata, Gnaphosa	389

sericata, Pythonissa	389	studiosum, Anelosimus	311
serrata, Agriognatha	357	studiosum, Theridion	311
sexoculatus, Modisimus	292	suavis, Zygoballus	482
sexpunctata, Micrathena	374	submaculosus, Selenops	406
Sidusa	460	subterraneum, ChORIZOMMA	274
signata, Corythalia	490	subtilissima, Ninetis	298
signifer, Leptopholcus	297	<i>suggerens</i> , <i>Nesticus</i>	321
Siloca	456	Synageles	456
similis, Ceraticelus	325	Synemosyna	450
simoni, Agriognatha	355	Syrisca	389
<i>simplex</i> , <i>Gnaphosa</i>	390	Systenita	294
simplex, Paidisca	301		
simplex, Scotolathys	301	taeniola, Attus	463
simplicipes, Lyssomanes	449	taeniola, Metacyrba	463
Singa	344	Tama	274
Smeringopus	294	Tarentula	278
smithi, Synemosyna	450	tauricornis, Epeira	346
solitaria, Ariadna	264	tauricornis, Wagneriana	346
Sphaerobothria	261	taurifrons, Bucranium	418
<i>sphaerula</i> , <i>Theridula</i>	320	Telchius	265
spiculosa, Leucauge	360	Teminius	397
spinierus, Eurypelma	261	Temnida	436
spinierus, Mygale	261	<i>Tentabunda</i>	398
spinimanus, Heteroonops	265	tenuis, Aysha	435
spinimanus, Oonops	265	tenuissima, Tetragnatha	367
<i>spinosa</i> , <i>Misumena</i>	415	Tetrablemma	269
<i>spinosus</i> , <i>Misumenops</i>	415	Tetragnatha	363
Spintharus	309	Tetragonophthalma	276
<i>spiralis</i> , <i>Gnaphosa</i>	390	Thalerothele	260
<i>spiralis</i> , <i>Spiropalpus</i>	325	Thanatidius	276
<i>Spiropalpus</i>	325	Thaumasias	277
squamata, Corythalia	488	Thelechoris	260
Stasina	400	Theonoe	321
Steatoda	311	Theridion	317
stellata, Marxia	339	theridionina, Wendilgarda	369
stellata, Epeira	339	Theridiosoma	367
Stemmops	316	Theridula	320
stenaspis, Triaeris	268	Theuma	393
Stephanopoides	410	Thiodina	451
Stoides	459	Thomisus	415
Stoidis	484	<i>thorelli</i> , <i>Cyclosa</i>	338
Stothis	260	Thwaitesia	311
striata, Aysha	433	thwaitesii, Miagrammopes	330
striatipes, Thalerothele	260	tibialis, Clubiona	427
<i>striatipes</i> , <i>Theonoe</i>	321	tibialis, Hentzia	498

tibialis, Lucarachne	350	velox, Anyphaena	435
Tidarren	319	velox, Aysha	435
tigrina, Clubiona	425	vernalis, Anoka	495
timidus, Selenops	407	vernalis, Ctenus	383
<i>tipuloides</i> , <i>Pholcus</i>	294	vernalis, Hentzia	496
toussanti, Isaloides	408	vernalis, Wala	495
Trachelas	443	venatoria, Aranea	403
translatus, Pellenes	492	venatoria, Heteropoda	403
transversa, Clubiona	427	venusta, Epeira	361
trapezoides, Argyrodes	310	venusta, Leucage	361
Triacris	268	Verrucosa	345
<i>triangularis</i> , <i>Mangora</i>	341	<i>verrucosa</i> , <i>Epeira</i>	345
<i>triarana</i> , <i>Epeira</i>	335	<i>vicina</i> , <i>Linyphia</i>	323
tricuspis, Clubiona	425	vigilax, Nerie	325
tricuspis, Wulfila	438	vigilax, Walckenaera	325
trifasciata, Aranea	334	vigors, Micrathena	374
trifasciata, Argiope	334	viridans, Peucetia	287
trigonum, Argyrodes	308	viridans, Oxyopes	287
trigonum, Conopistha	308	<i>viride</i> , <i>Cheiracanthium</i>	420
trigonum, Theridium	308	<i>volucris</i> , <i>Epeira</i>	342
<i>trivittata</i> , <i>Epeira</i>	341	<i>volucris</i> , <i>Neoscona</i>	342
tuberculatum, Oxyopeidon	286	vulgaris, Epeira	342
tuberculifer, Carepalxis	344	vulgaris, Neoscona	342
tuberculifer, Scoloderus	344	Wagneriana	346
tumidus, Ceraticelus	324	Wala	493
tumivulva, Clubiona	425	Walckenaera	325
Turckheimia	337	walckenaeri, Cyclosa	337
turquinensis, Aysha	434	walckenaeri, Otiothops	275
turquinensis, Sidusa	461	<i>walckenaerii</i> , <i>Turckheimia</i>	337
Ulesanis	302	Wendilgarda	369
Uloborus	327	weyers, Emathis	466
uncicurva, Eustala	339	wheeleri, Caridassus	392
undecimtuberculata, Epeira	346	wheeleri, Corinna	442
undecimtuberculata, Wagneri- ana	346	wickhami, Icius	500
undulata, Pelopatis	276	wittfeldae, Epeira	340
undulata, Tetragnophthalma	276	wittfeldae, Metazygia	339
unimaculatum, Eustala	339	Wixia	346
variabilis, Singa	345	Wulfila	437
variegata, Balmaceda	465	Xenesthis	261
variegatus, Phidippus	503	Xenestis	261
variegatus, Salticus	503	Xysticus	415
variegatus, Uloborus	328	Zimiris	393
		Zygoballus	480